Public Utilities

Volume 60 No. 2 July 18, 1957

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Motorola multi-channel microwave facilities can transmit:
VOICE • CONTROL • COMMUNICATIONS • VIDEO

ECONOMICAL The most economical type of multi-channel communication.

EASY TO EXPAND Channels can be inexpensively added.

WEATHERPROOF Maximum protection from failure due to snow, ice, rain, lightning, and high winds.

VERSATILE Spans rivers, swamps, mountains, and busy city streets with ease and is virtually unlimited in length.

PRIVATE Owner has complete control of communications facilities at all times; narrow beam assures private communication.

Modern industry is increasing the emphasis on automation, data transmission, and centralized control in order to provide better protection of personnel and property, better service, and more efficient operation. Motorola microwave can provide the *complete* communications system needed for this type of operation.

More miles of MICROWAVE—IN and OPERATING

Working dependably over the years, Motorola microwave systems ranging from 7 to over 1000 miles in length are operating in all types of applications and in all kinds of weather. This greater acceptance and experience means engineering and production "know how"—equipment which performs better, lasts longer, and costs less to maintain. These extra dividends repeatedly appear in operational records of Motorola users.

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Pacific Gas & Electric Co.
Southern California Edison Co.
Northern Indiana Public Service Co.
Idaho Power Co.
Central Illinois Public Service Co.
Illinois Power Co.
Kansas Power & Light Co.
Kentucky Utilities Co.
Louisiana Power & Light Co.
Cleveland Electric Illuminating Co.
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Oklahoma Gas & Electric Co.
Pacific Power & Light Co.
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MOTOROLA

COMMUNICATIONS & ELECTRONICS, INC.

The *Complete* Supplier of Radio Communications Systems
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riptions: Address correspondence to PUBLIC ITIES FORTNIGHTLY, circulation department, Pennsylvania Building, Washington 4, D. C. one month for change of address.

e copies $1.00. Annual subscription price issues a year): United States and posses-, $15.00; Pan American countries, $15.00; da, $16.00; all other countries, $17.50.

red as second-class matter April 29, 1915, r the Act of March 3, 1879, at the Post Office altimore, Md., December 31, 1936.

Public Utilities

FORTNIGHTLY

VOLUME 60 JULY 18, 1957 NUMBER 2

ARTICLES

FEATURE SECTIONS

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS
Executive, Editorial & Advertising Offices ....332 PENNSYLVANIA BLDG., WASHINGTON 4, D. C.
Publication Office ....CANDLER BUILDING, BALTIMORE 2, MD.
Advertising Representatives:
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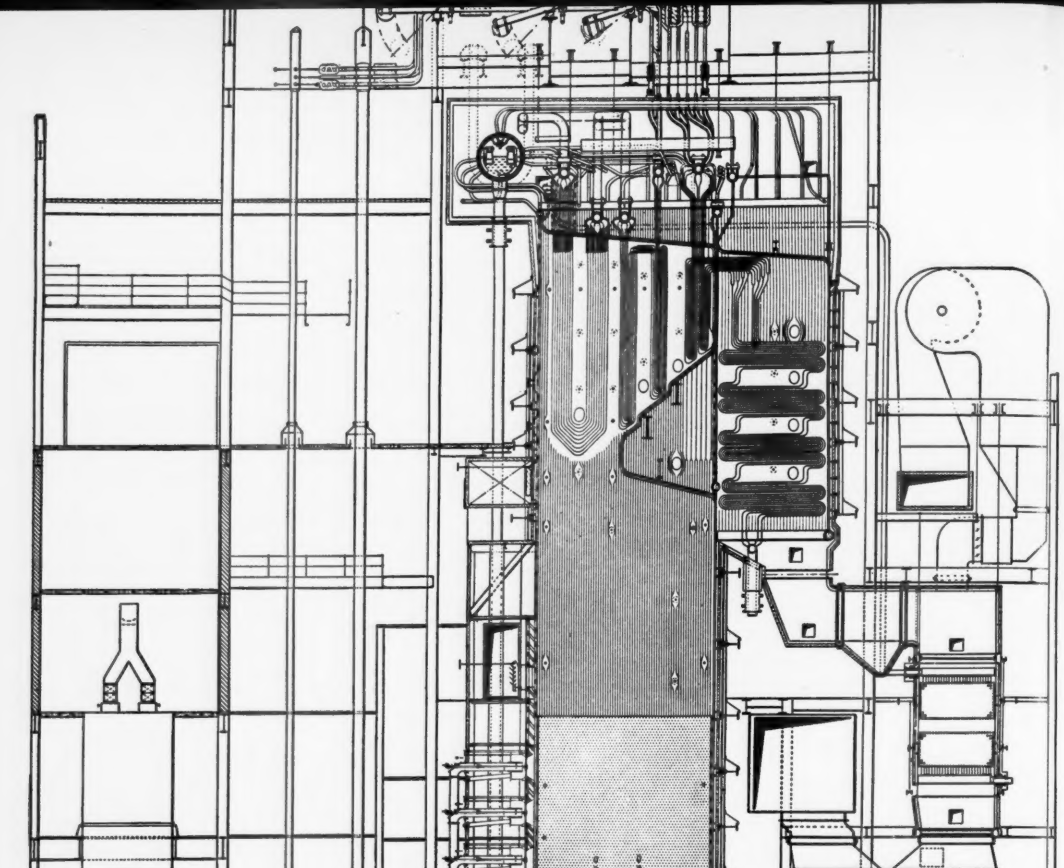

Latest unit for Burlington Station, Public Service Electric & Gas Company has a capacity of 1,350,000 lb of steam per hr. Comprehensive circulation tests on this unit, plus more than a year of sustained performance, proved that natural circulation boilers can operate easily with drum design pressures of 2800 psi, for throttle conditions over 2400 psi.

B&W NATURAL CIRCULATION BOILERS ABOVE 2600 PSI DESIGN PRESSURE

NAME OF UTILITY	STATION	NO. UNITS	DES. PRESS. psi	THROTTLE PRESS. psi	TOTAL TEMP. F	REHEAT TEMP. F	TOTAL KW
Indiana & Michigan Electric Co.	Twin Branch	1	2650	2335	940	900	76,500
Public Service Electric & Gas Co.	Burlington	1	2700	2350	1100	1050	200,000
Public Service Electric & Gas Co.	Linden	1	2700	2350	1100	1050	225,000
Southern California Edison Co.	Huntington Beach	2	2700	2400	1050	1000	400,000
Virginia Electric & Power Co.	Bremo	1	2700	2400	1000	1000	150,000
International General Electric Company	Chiba	1	2700	2400	1060	1010	175,000
Memphis Light, Gas & Water Div.	Thos. H. Allen	3	2825	2400	1053	1053	862,500
Detroit Edison Co.	St. Clair	1	2700	2400	1050	1000	325,000
Virginia Electric & Power Co.	Portsmouth	1	2700	2400	1000	1000	150,000
Southern California Edison Co.	Mandalay	2	2700	2400	1050	1000	400,000
Pacific Gas & Electric Co.	Pittsburg	2	2725	2400	1050	1000	660,000
TOTAL CAPACITY SERVED							3,624,000

If You Are Considering...

400 PSI THROTTLE CONDITIONS

You'll Want to Investigate B&W's Unique Experience

re's a reason why so many progressive utility panies and their engineers, thinking of turbine ttle conditions of 2400 psi, have turned to W. It is the unique record of performance of W high pressure natural circulation boilers.

plicity of installation and operation has been ght to high pressure steam generation by B&W ral circulation boilers. They have lower oper- g costs because no machinery requiring power maintenance is needed for circulation.

g range operating experience—since 1939— been gained with natural circulation high pres- boilers operating above 2000 psi. Operators' ess with natural circulation boilers is due to the W Cyclone Steam Separator, and a design which es liberal use of outside downcomer capacity provides proper balance of makeup and riser s.

n turbines are an extra plus value. Cyclone m Separators not only maintain good circula- , but, used with Steam Washers, they maintain ptionally clean turbines. At one plant, where a B&W Radiant Boiler has been on the line constantly for a year, the turbine manufacturer reports that the turbine is the cleanest high pressure unit his engineers have ever seen. And tubes in the high duty part of the furnace are as clean internally as the day they were installed.

B&W first designed natural circulation boilers for operation at drum pressures over 2000 psi nearly 20 years ago. Today 86 B&W natural circulation boilers with these high design pressures are in operation and 52 more are being built.

The Babcock & Wilcox Company, Boiler Division, 161 East 42nd Street, New York 17, N. Y.

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B&W

BOILER DIVISION

Pages with the Editors

THE late Cordell Hull, long-time Secretary of State during the Franklin D. Roosevelt administrations, used to have a pat explanation as to why his job was so difficult and vulnerable to more criticism than any other Cabinet post. It is simply, explained Mr. Hull, that "everybody considers himself an expert on foreign policy."

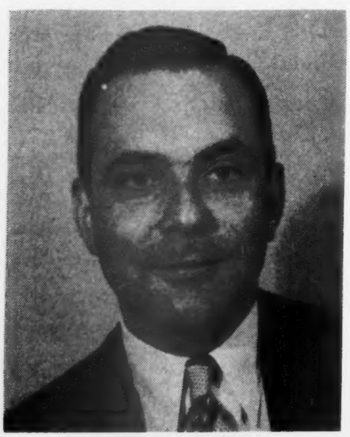
PERHAPS the same explanation might be made with respect to solving the allied problems of traffic and transit difficulties. A surprising number of people consider themselves experts on transportation. Perhaps it is just one of those little kinks in human nature. The same citizen who would not dream of disputing his doctor, lawyer, plumber, or other professional expert or technician in their own specialties, nevertheless considers himself qualified to talk very knowingly about solving city transportation and traffic problems.

STRANGELY enough, the proposed solutions from these volunteer lay experts invariably reflect their own status with respect to the situation. The daily car driver thinks there should be more and better highways, wider streets, more parking places. The users of common carrier transportation think in terms of restricting parking and curbing private automobile transportation during rush hours. The man who lives in the suburbs is all for fast throughways and freeways into the downtown area. The man who lives in the city and has to pay the taxes would like to see something done about taxing the man who lives in the suburbs.

E. L. TENNYSON

AND so it goes. Everybody is an expert, or thinks he is. But meanwhile the transit and traffic problems are further from solution than ever. Why does our traffic congestion grow worse despite a multiplicity of new highways, superhighways, bridges, tunnels, and so forth? And why do the attempts at stricter traffic controls, such as parking restrictions, one-way streets during rush hours, pedestrian light controls, off-the-street parking, and other measures only seem to make matters worse?

* * * *



ROBERT L. BANKS

THE opening article in this issue by E. L. TENNYSON, transit operations engineer of the city of Philadelphia, Pennsylvania, and ROBERT L. BANKS, transportation consultant of Washington, D. C., is an analysis of urban transportation woes, especially as they relate to the transit utilities. These authors think the key to the problem lies in stimulating an

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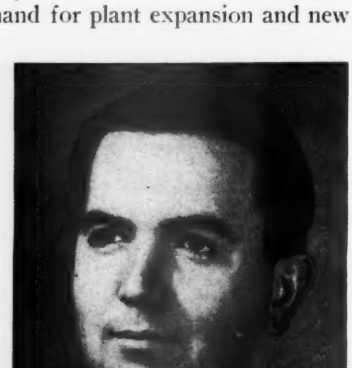
increase in the productivity of transit. Whether our expert readers agree or not, tney will find this informative discussion by two well-known authors on an increasingly serious and commonplace situation interesting and thoughtful reading.

MR. BANKS, a native of New York, is a consultant in transportation economics. He was formerly associated with the New York Central Railroad, the Civil Aeronautics Board, and the Department of the Air Force. He is a graduate of Columbia University and was a Fellow in Transportation at Yale.

MR. TENNYSON, a native of New Jersey, is transit operations engineer for the city of Philadelphia, which owns a rapid transit system which it leases for private operation. In prior years, MR. TENNYSON served as traction commissioner for Youngstown, Ohio; vice president for Kenosha Motor Coach Lines, interurban division; analyst for the trustees of Pittsburgh Railways & Motor Coach companies; and agent for Greyhound Lines. MR. TENNYSON is a registered engineer, having obtained his BS and BE from Carnegie Institute of Technology.

* * * *

THE high cost of money is undoubtedly making it more expensive and difficult for public utility companies to raise money to take care of the skyrocketing demand for plant expansion and new construction. But will it be followed by higher rates to customers? These companies are paying the highest interest rates in nearly a quarter of a century because of their need to sell debt issues.



JOHN J. HASSETT

RECENTLY a statement was made on the floor of Congress that the so-called "hard money" policy of the Eisenhower administration is going to saddle gas, electric, and telephone customers with higher rates over the next twenty to thirty years. This statement was made by a government ownership advocate whose real concern may have been that the higher cost for capital is putting pressure on federal power and other tax-exempt agencies to finance their operations on a more self-supporting basis.

BUT, is it true that the increased cost of capital is especially detrimental to public utility operations, or will it of itself result in higher operating costs? HERBERT BRATTER, Washington, D. C., economist and professional writer of business articles, finds a very contrary indication: namely, that a resumption of cheap money with a probable stimulation of inflation would have a far more detrimental effect on utility economics.

* * * *

JOHN J. HASSETT, formerly of the editorial staff of this magazine, has since been active in the public relations field in Washington, D. C., and New York city. MR. HASSETT was born in Washington and is a graduate of nearby Georgetown University. He has been a staff member of the public information department of AGA and Washington director of public relations for Structural Clay Products Institute. Out of his experiences on both sides of the editorial desk he has written his estimate of the REA's outlook.

THE next number of this magazine will be out August 1st.

The Editors

Coming IN THE NEXT ISSUE

(August 1, 1957, issue)

★

THE FUTURE OF SOLAR ENERGY

During the first half of the twentieth century, the amount of coal used to generate one kilowatt-hour of electricity dropped from seven pounds to less than a pound, or its equivalent in other fuels. But there is widespread belief among engineers that the industry has just about reached the limit of technical efficiency with respect to fuel economy, so that during the second half of the twentieth century a shortage of fossil fuels promises to become a real problem of world economy. Some nations already are in short supply and some have none at all of their own. The best of the hydroelectric sites have already been developed and the economic utilization of atomic power is still an unknown quantity. Hence the continued interest in the possibility of using solar energy, which is the abundant and everlasting heritage of the entire world. John I. Yellott, executive director, Association for Applied Solar Energy, Phoenix, Arizona, has written a comprehensive analysis of the possibilities of solar energy utilization, amply supplemented with graphic illustrations.

RURAL LOAD DEVELOPMENT THROUGH UNITED CO-OPERATION

Three years ago former REA Administrator Ancher Nelsen invited members of the electric utility industry, both business-managed companies and REA co-operatives, along with equipment manufacturers and agricultural experts, to a joint meeting on the subject of farm utilization of electricity. The purpose of this conference was to discuss ways and means for expanding farm use of power and out of it grew the Inter-Industry Farm Electric Utilization Council. Guy W. Thomas, vice president, commercial operations, Public Service Company of Colorado, describes the organization, development, and operation of this group, which is providing leadership in the accomplishment of more and better use of power on the farm.

UTILITIES FIND FORESTRY PAYS DIVIDENDS

Upper Peninsula Power Company in northern Michigan, started eight years ago what has come to be known as a "tree farm," and put 45,000 acres of timberland under the management of professional foresters. There were several reasons for this move: to insure continued supply of basic material for the company's best customers, to see how modern management methods would work out, and to provide attractive forests for recreational facilities. Southern California Edison is another utility company which has gone in for forestry. James H. Collins, professional writer of business articles, reports on this interesting innovation of utility company practice.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

Remarkable Remarks

"There never was in the world two opinions alike."
—Montaigne

David E. Lilienthal
Former chairman, Tennessee Valley Authority.

"[The] new concepts of the relation of public and private spheres of activity are great American achievements, perhaps as important as any of the great social innovations or technical inventions of our past."

Willard Frank Libby
Member, Atomic Energy Commission.

"If we treat the atom well and handle her wisely, she can give us material benefit almost without end, and the awful aspect of the warlike atom will be softened by the great power for good that she has brought us."

Editorial Statement
The Wall Street Journal.

"It seems to us that the longevity of bureaus, and the difficulties in getting rid of one once it is started, are worth remembering at a time when federal government is proposing a whole new list of 'services' for the public."

Roy H. Glover
Chairman of the board, Anaconda Company.

"The future of nuclear energy through the utilization of thorium and uranium is limited by exhaustible ore reserves; but the future through controlled thermonuclear reaction is as limitless as the oceans of the world."

Arthur H. Compton
Professor, Washington University (St. Louis, Missouri).

". . . a great venture of faith is needed. It is this venture, based on the faith that great new things can be done in which one will share with many others, that has brought strength and prosperity to the nations that now lead."

George Rothwell Brown
Columnist.

"A whole generation of Americans has grown up under the hand-out state. These millions of people cannot recall an earlier time when people did for themselves as individuals, or did on local government levels, what they have been taught to expect from big government in Washington."

John S. Coleman
Former president, Chamber of Commerce of the United States.

"[There is] a dangerous trend against the free market principle and toward the welfare state idea. We must be against it because we are for something far more progressive, far more liberal, far more equitable, and far more beneficial to the American people as a whole than any welfare state idea."

M. S. Rukeyser
Columnist.

"While racketeering is to be deplored, it is the foam on the surface. The abuse lies in the conferring of unrestrained power by law in union officials. The Congress should set rules of fair play to govern union financial disclosures, the handling of trustee functions with union funds, antimonopoly standards for unions as well as employers, and limitations on the artificial nuisance value created by fiat for exclusive bargaining agents."

Harry Otten, system operation manager, and the New York areas served by Con Edison

"We've grown up with private line communications"

— an interview with Harry Otten, Con Edison system operation manager

When did Consolidated Edison first start using private line communications?

Back in 1927. It was our first automatic alarm system on certain of our lines. The board is in our operations center, and certain parts are as useful now as they were 30 years ago.

And, of course, your needs have increased since then

Tremendously! We now generate 3,400,000 Kw to serve 8½ million people in the five-county metropolitan area. Naturally, we've had to add to the communications to let us keep pace.

What do these communications include?

Principally, direct telephone communications between our dispatching centers and generating plants, substations and service headquarters throughout the 600-square-mile area that we serve. In addition, Bell System circuits perform continuously many vital functions, such as automatic control and protection, telemetering of load measurements at remote locations, supervisory control of normally unattended substations, etc.

What's the main advantage of these facilities?

First of all, we couldn't operate without them. We think of private line channels as a production tool. Thus, we obtain the advantages of ready availability of new circuits when and where we need them and the backing of an organization trained to design, construct and maintain communication facilities.

• • •

Private line communications can fit into your operation as profitably. Just call your Bell Telephone Company business office. A representative will be glad to make a study of your requirements.

BELL TELEPHONE SYSTEM

PRIVATE LINE TELEPHONE • PRIVATE LINE TELETYPEWRITER DATA TRANSMISSION SYSTEMS • CHANNELS FOR: REMOTE METERING AND CONTROL • TELEPHOTOGRAPH • CLOSED CIRCUIT TV

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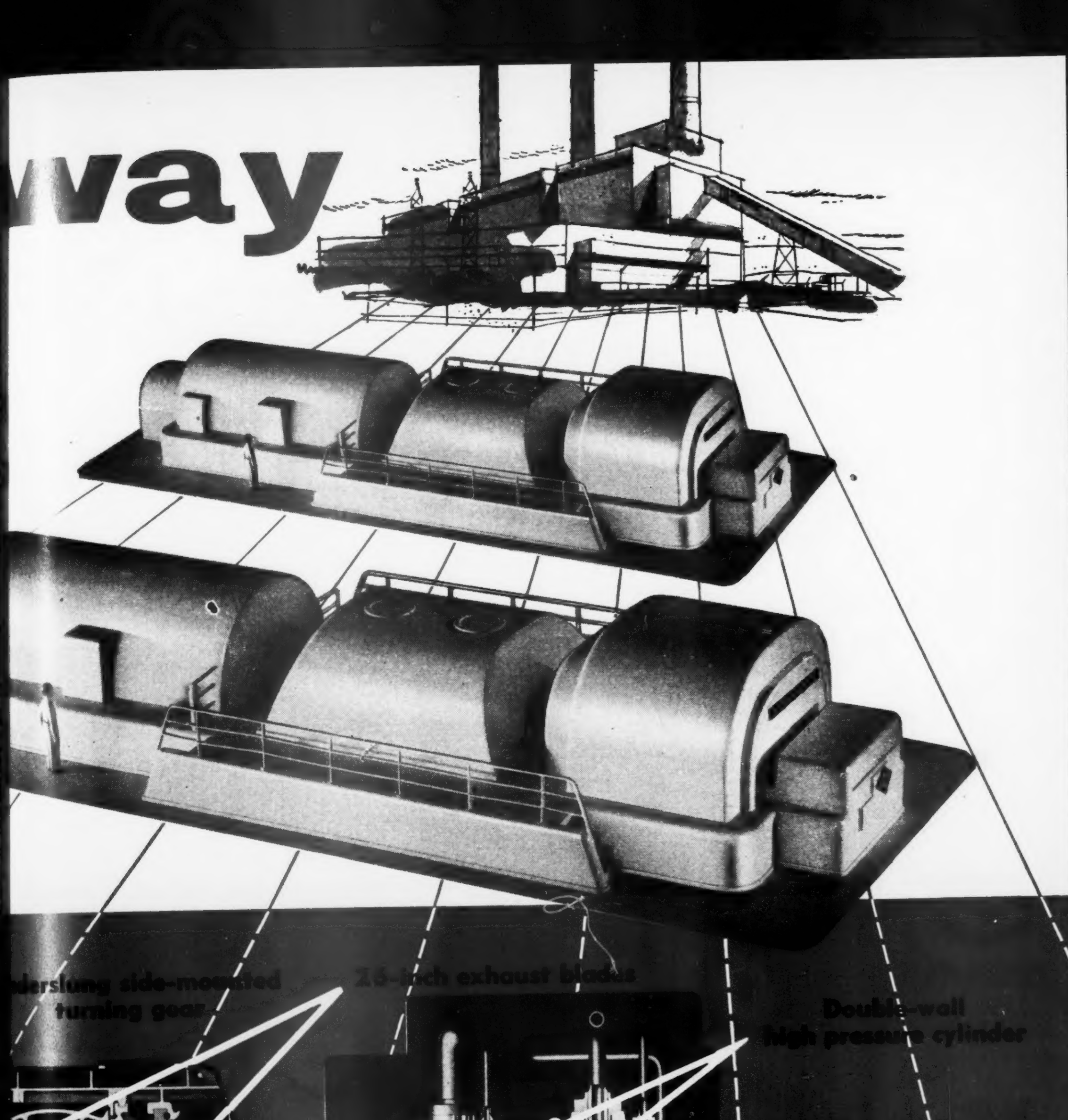

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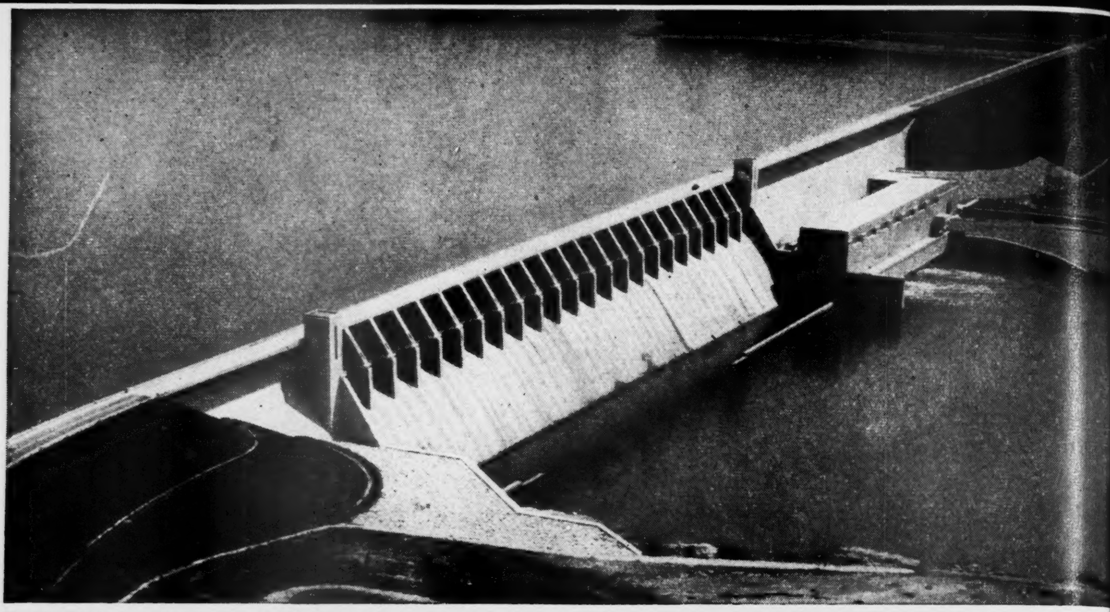
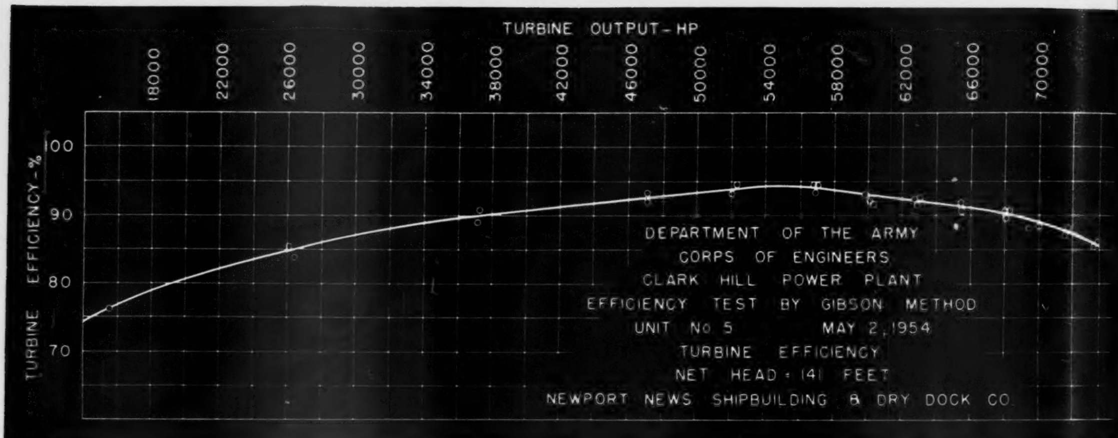




Maximum efficiency of 94.1%

Reflects advanced practices at Newport News

THE GRAPH shows performance of a 55,000 horsepower turbine, one of seven such units built by Newport News for the Clark Hill Power Plant (see photo).

Shape of the curve is typical . . . not exceptional . . . for Newport News turbine performance. Regular, uniform, showing no-cut-off at full load, it indicates consistent delivery and stable operation.

And especially, experience in design and model testing.

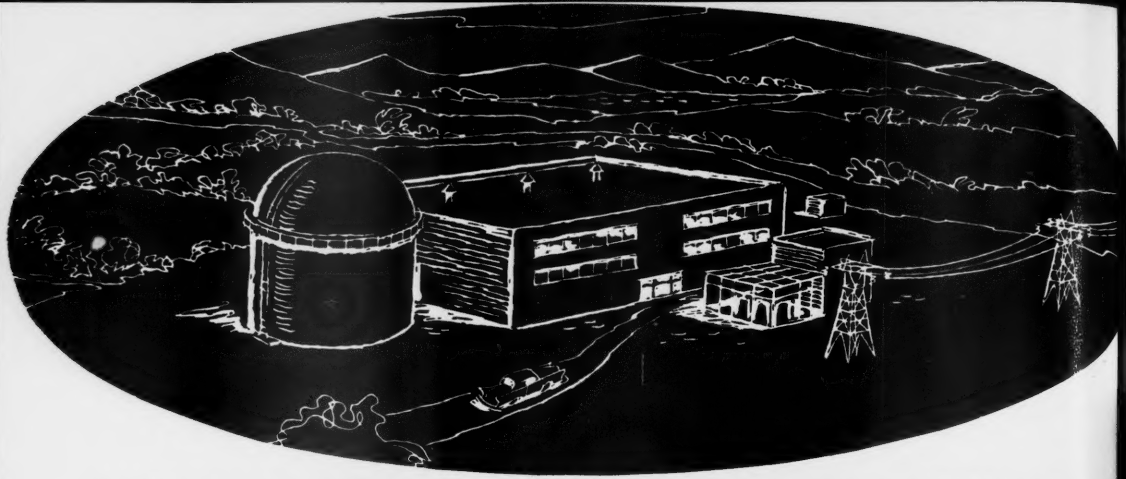
At Newport News, turbine runners are continually being designed and redesigned for improvements in performance. And often upon receiving a contract for turbines, a model setting is built and complete tests made. So far, Newport News has filled turbine contracts with an aggregate rated output in excess of 7,000,000 horsepower.

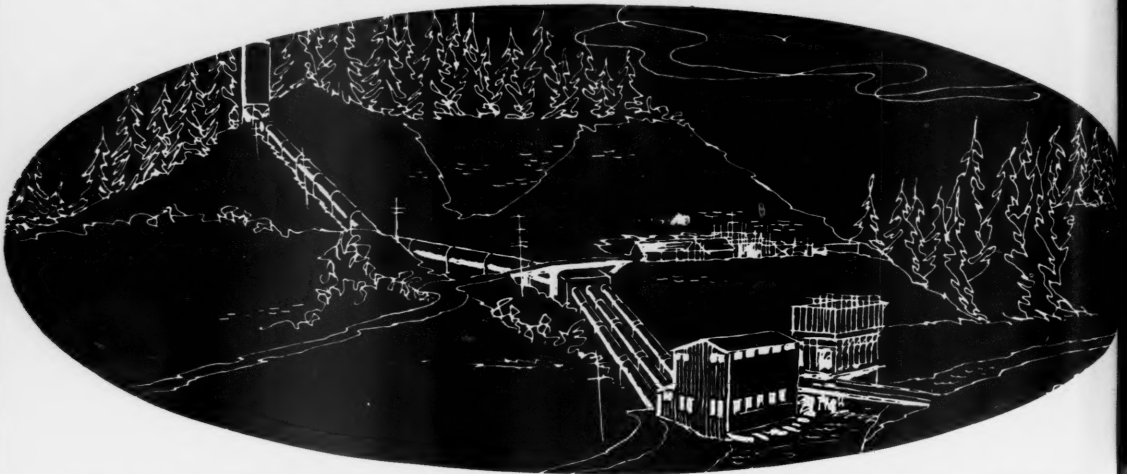
Penstocks, spiral casings, valves, pumps, rack rakes and other essentials are also designed and built by Newport News. Our illustrated booklet, "WATER POWER EQUIPMENT," will be sent to you upon request.

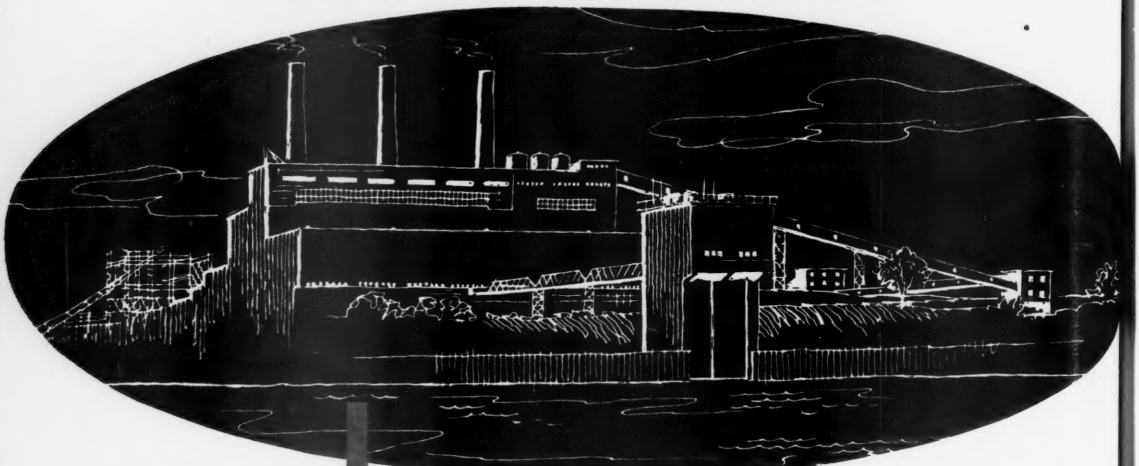
Engineers . . . Desirable positions available at Newport News for Designers and Engineers in many categories. Address inquiries to Employment Manager.

Newport News

Shipbuilding and Dry Dock Company
Newport News, Virginia







In actual road tests . . .

Dodge won top honors in test after test between comparable models of all three low-priced trucks. Special high-speed camera records actual finish of hill-climb test. From a standing start, test crews raced all three trucks up a 32% grade. Dodge was *first* by five lengths.

and on your job . . .

Dodge gives you more V-8 power, in every weight class, than either of the other two low-priced trucks. From 204-hp. pick-ups to 232-hp. tandems, the extra power you get in a Dodge means an on-the-job performance bonus for you. It means greater economy, too, because it cuts down engine strain, reduces wear and repairs.

Dodge *Power Giants* outpower, outperform the "other two" low-priced makes by wide margin!

t power? Dodge outpowers its low-priced competi- by as much as 27 percent.

t economical performance? The advanced design he Dodge short-stroke V-8 produces the most efficient usage in the industry. You get more miles per gallon full power on *regular gas.*

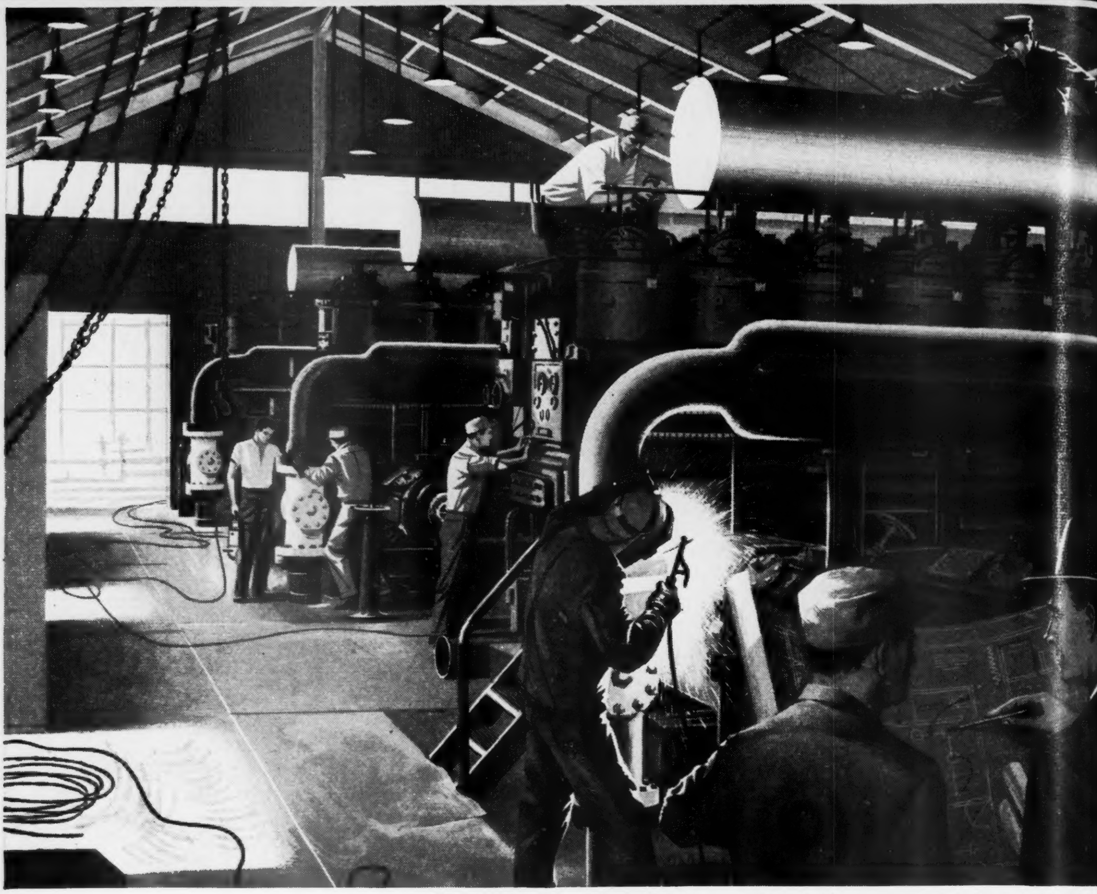
t extra payload capacity and handling ease? Dodge 'em beat on both counts.

about it? Don't you think you should find out for rself? Just give your Dodge dealer a ring. He'll bring uck right to your door and he'll show you certified results that demonstrate Dodge is a winner in actual and on your job.

DODGE

PowerGiants

MOST POWER OF THE LOW-PRICED 3



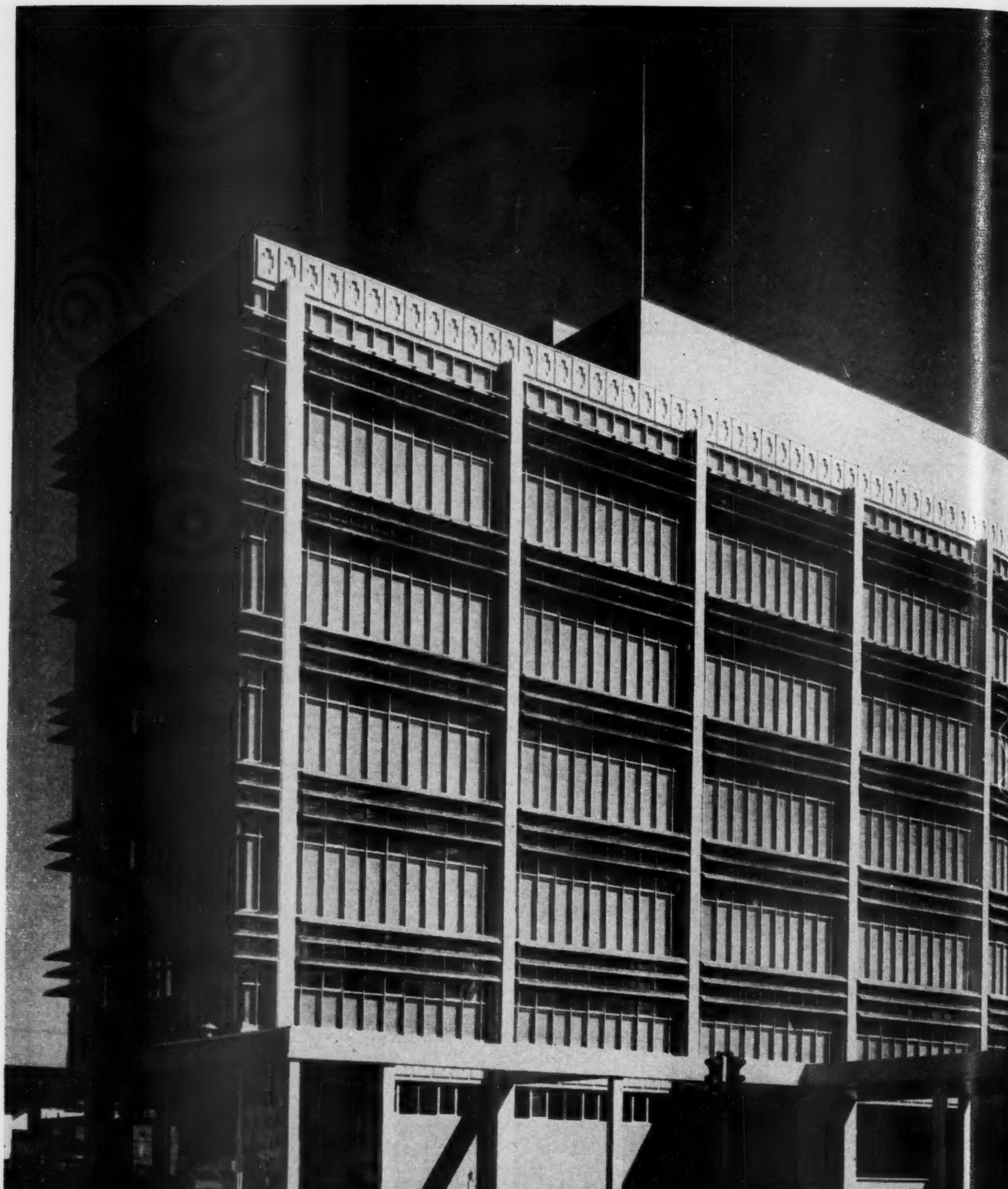
New compressor stations, like the one pictured above, are constantly being built to the steadily increasing demands for natural gas. These compressor stations pump natur through Columbia's 36,716 miles of pipeline to homes and industries in America's Heart

UTILITIES

A·l·m·a·n·a·c·k

JULY-AUGUST

Thursday—18 *University of Michigan Engineering Summer Conferences will be held, Ann Arbor, Mich. Aug. 19-30.* ***Advance notice.***	**Friday—19** *Western Electronic Show and Convention will be held, San Francisco, Cal. Aug. 20-23.* ***Advance notice.***	**Saturday—20** *Alaska Independent Telephone Association will hold annual convention, Kodiak, Alaska. Aug. 26-28.* ***Advance notice.***	**Sunday—21** *Annual Appalachian Gas Measurement Short Course will be held, West Virginia University, Morgantown, W. Va. Aug. 26-28.* ***Advance notice.***
Monday—22 *Western Summer Radio-Television and Appliance Market begins western merchandise mart, San Francisco, Cal.*	**Tuesday—23** *American Institute of Electrical Engineers will hold Pacific general meeting, Yakima, Wash. Aug. 26-30.* ***Advance notice.***	**Wednesday—24** *American Bar Association begins annual meeting, London, England.*	**Thursday—25** *Southeastern Electric Exchange, Personnel Administration Section, begins conference, Richmond, Va.*
Friday—26 *Pacific Coast Gas Association will hold convention, San Francisco, Cal. Sept. 3-5.* ***Advance notice.***	**Saturday—27** *American Water Works Association, Wisconsin Section, will hold annual meeting, Milwaukee, Wis. Sept. 4-6.* ***Advance notice.***	**Sunday—28** *New Jersey Gas Association will hold annual meeting, Spring Lake, N. J. Sept 6.* ***Advance notice.***	**Monday—29** *Independent Natural Gas Association of America will hold annual meeting, Houston, Tex. Sept. 9, 10.* ***Advance notice.***
Tuesday—30 *American Gas Association will hold industrial gas school, Pittsburgh, Pa. Sept. 9-13.* ***Advance notice.***	**Wednesday—31** *Illuminating Engineering Society will hold national technical conference, Atlanta, Ga. Sept. 9-13.* ***Advance notice.***	**AUGUST** **Thursday—1** *Instrument Society of America will hold annual instrument automation conference and exhibit, Cleveland, Ohio. Sept. 9-13.* ***Advance notice.***	**Friday—2** *Tennessee Telephone Association will hold annual convention, Nashville, Tenn. Sept. 12, 13.* ***Advance notice.***



Courtesy, British Columbia Electric Company, Ltd.

Modern Utility Office Building—Victoria, British Columbia

Public Utilities
FORTNIGHTLY

VOL. 60, NO. 2 JULY 18, 1957

Greater Productivity: Key to The Transit Paradox

An analytical article about the woes of urban transportation, especially as they relate to transit utilities. The key to the problem, it appears, lies in stimulating an increase in the productivity of transit. Whether the reader agrees or not, he will be interested in this informative discussion by two well-known authors.

BY ROBERT L. BANKS AND E. L. TENNYSON*

NOT long ago an article in this magazine described the "paradox of the transit industry today."[1] In essence, the paradox consists of (a) increased *potential* demand for public transit service in our expanding metropolitan areas and (b) the dim financial prospects of the transit industry. In the simple and familiar concept of productivity lies both the explanation of this paradox and its susceptibility of solution.

For some years now, traffic congestion and the problems to which it gives rise have attracted more talk, talent, and money than any other area of urban activity. To alleviate the congestion on city streets,

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* Transit operations engineer, Philadelphia, Pennsylvania, and transportation consultant, Washington, D. C., respectively. For additional personal note, see "Pages with the Editors."

[1] "Transit Survival Poses 'Ingenious Paradox,'" by Herbert Bratter, PUBLIC UTILITIES FORTNIGHTLY, December 20, 1956, issue, Vol. 58, No. 13, p. 975.

state highway departments spend billions of dollars annually, and of late a significant influx of federal billions in aid has augmented these efforts. The cities themselves contribute hundreds of millions more from hard-pressed local tax resources, and autonomous authorities, such as the Port of New York, ante up additional tax-free millions.

Despite all this effort, no planned program or project has yet been advanced which offers promise of fundamental center city improvements. We are further than ever from a solution to our urban problems. Why? Why don't these continuous injections of new bridges, tunnels, and superhighways solve the problem? Why do large doses of parking meters, one-way streets, and electronic traffic control systems only make matters worse?

THE reason that multibillion-dollar expenditures on traffic nostrums have netted no gain for our cities is that exclusive concentration on new roadways, parking lots, and related motor vehicle facilities has had the effect of drying up parallel public transit service as fast as the new expressways come into being. In short, the money is diversionary when it ought to be expansionary.

Each day our population increases by 7,200; motor vehicle registrations by 11,500. Concurrently, an increase in agricultural productivity is diminishing the rural population, so that close to 90 per cent of our people are now urban dwellers. With these two factors operating to increase the ebb and flow of city traffic, congestion, stagnation, and decay become a natural progression when public policy fosters substitution of one form of transportation for another, with no attempt to enlarge the effective total capacity of urban circulatory agencies.

The plight of the urban transit industry has often been announced. As the highways get busier, transit passengers decline, costs go up, net income goes down, service deteriorates, and cities get blighted. Private capital avoids new investment in transit as it would avoid the plague. The nation's largest transit holding company has a dividend-price ratio of 9 per cent in spite of wide diversification and sustained pay-out. The nation's largest urban bus company has earned a net corporate deficit over the past thirty years. Even bonds sell 15 per cent below par. As a result, it is popular to suppose that transit is passé.

SUCH thinking, however, ignores the little-appreciated fact (as disclosed by the December, 1954, issue of *Public Roads*) that a majority of urban-dwelling women cannot even drive a car. Lacking licenses, they must have transit or a chauffeur. The transit Cassandras also ignore the fact that from 50 to 85 per cent of center city shoppers come by transit because of traffic and parking problems, as well as for other reasons. In the larger metropolitan areas, most downtown workers use transit, and, of course, it is also essential for a great number of schoolchildren. As a result, the highway system, existing or proposed, has not the economic capacity to move more than a fraction of the rush-hour volume in automobiles.

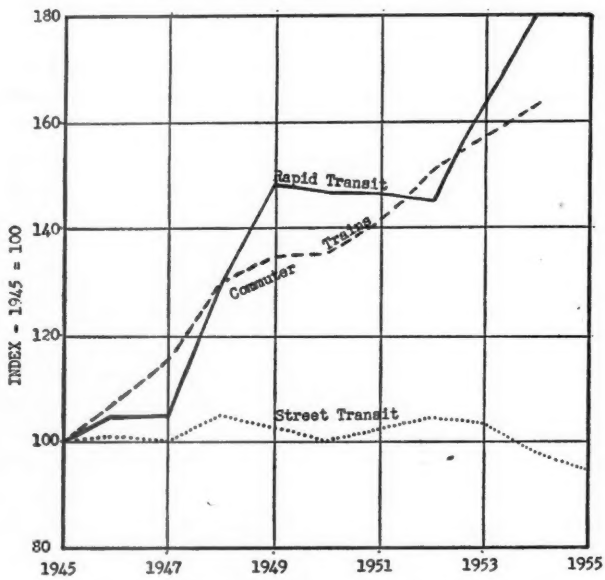
Hence, the answer to the transit paradox and the solution to our traffic problems are one and the same: We must make our cities more livable by improving *both* highway facilities and public transit. Instead of merely diverting people from

one to the other with congestion and bankruptcy as a result, we shall then have an *expanded* transport capacity, with public and private means of travel complementing one another, each where it can best serve the community

Before considering how transit may be improved, it seems desirable to determine why transit is in such desperate straits, if indeed it is so essential to our present situation. Transit is desperate because it is not producing. Despite a 53 per cent drop in passengers during the last decade, transit has 10 billion annual customers still remaining, but these diminish with each passing day, because transit is not producing a quality product at a reasonable price. Two-thirds of our families have an automobile which can average at least 20 miles per hour in town. Why then ride transit, whose speed has actually decreased from 11 to 9 miles per hour? If a man lives five miles from the office, why should he spend thirty-five minutes on a crowded, hot bus held up by every double-parked automobile when he can drive home in less than half the time? We have appealed to his sense of reason by telling him there is not room for everyone to drive, but reason yields to the plain fact that congestion hurts the bus service more than it does the automobile user.

With this unpleasant picture, what can be done to fit transit into the modern urban scheme? *The basic thing that needs to be done is to increase transit's productivity.*

TRANSIT FARES HAVE DOUBLED IN TEN YEARS
BUT WHAT HAS HAPPENED TO REVENUES?



TEN-YEAR INDEX OF URBAN PASSENGER REVENUES
Sources, ATA Fact Book and AAR Summary 38

At one fell swoop this will decrease transit's costs and increase transit's revenues. Let us consider this proposition.

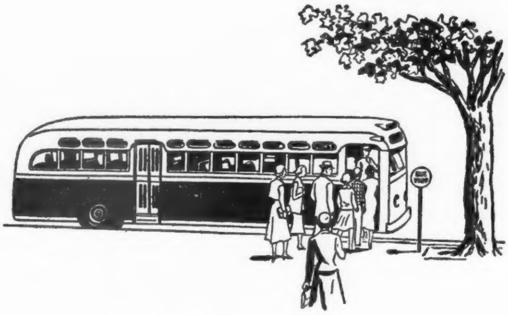
The greatest obstacle to profitable transit operation is a serious loss in productivity at a time when sharp continued increases in productivity are characteristic of almost every other segment in the American economy. Ten years ago transit was producing about 550 seat-miles per man-hour but, due to slower movements in heavier traffic and the wide-scale substitution of smaller buses for larger streetcars, productivity in the big cities has today fallen to the neighborhood of 450 seat-miles per man-hour. This is a loss of 18 per cent in a period when wages have soared 100 per cent or more. Since 60 per cent of transit revenues go to wages, this is obviously a critical situation.

What then is high productivity transit service? It is transit which is operated on its own private rights of way where there is no congestion, where schedules are both faster and reliable (and, therefore, more attractive to riders), and where an employee can do up to forty times as much work and yet do it more easily. This is the essential ingredient for solving the transit paradox—the replacement of functionally obsolete big-city buses (competing on major traffic routes with hordes of automobiles for inadequate space) by truly economical rapid transit, rapid because it operates without interference, and economical because it is rapid.

By contrast with surface transit, where in critical evening hours productivity is often no greater than 360 seat-miles per driver hour, rapid transit results in spectacular boosts to productivity, ranging from 1,280 (with single cars) to 13,500 passenger miles per trainman-hour (with large cars in trains). A realistic standard is 6,000 passenger miles per trainman-hour—a thirteenfold increase. In almost every case such high productivity service has been successful in holding passengers to transit and keeping them off the crowded highways. (See graph, page 75.) Of the many such services, two examples will suffice. The Shaker Heights Rapid Transit in Cleveland, and the South Hills Suburban in Pittsburgh, both rail-served on private rights of way, have not only held to their prewar traffic volume, but have actually increased their daily ridership by significant numbers in the last decade. And both serve higher-income residential areas, where the incidence of automobile ownership is probably greater than the national average.

Yet even these services make their greatest contribution—and indeed justify their existence—during the weekday rush hours. It is as a peak-period carrier that high productivity transit comes into its own—since no transit service can hold its evening volume when television displaces the movie, nor will Saturday ever again be a heavy day of transit use. But it is precisely the peak periods, when the highway panaceas are most grossly inadequate, that determine transit's place in the modern urban scheme.

The reason transit productivity has been slipping is that it takes huge increments of new capital to step up productivity. Partly because of its regulated status, but primarily because of the free highways provided for competing automobiles, transit has not been able to get the money to increase its productivity. The amount of new investment in transit



Bus Patronage Appeals Useless

"EXPERIENCE *has shown that appeals to the citizenry to 'ride the bus and clear up congestion' are ineffective. As long as transit relies upon buses to serve heavy traffic routes, its low speeds will not attract riders; and its low productivity will not resolve transit's financial problems. For these reasons the transit solution in every major city must be a rapid transit system of some sort. Privately owned transit companies should be encouraged to participate in the forthcoming rapid transit renaissance, as they have in Philadelphia and Newark, but the cities must lead."*

has been insignificant compared to the lavish postwar capital improvement programs of other regulated utilities. Significantly, however, expenditures on new rapid transit facilities in the few cities which possess them exceed the money spent on buses in all the cities of the nation. In these few cities, Boston, Philadelphia, Chicago, New York, and Cleveland, among others, the true contribution of rapid transit to a viable community has received greater recognition than elsewhere.

In Texas they have proven that turnpikes cannot be built by private enterprise. The successful operation of air and water transportation throughout the nation is dependent on large-scale support from public funds. Only the railroads attempt to maintain large-scale "sunk" investment in transport facilities, and their financial record excites no envy. How then can we attract private capital to venture on transit facilities? The answer is that we cannot. New York found this out before the first war; Philadelphia, Detroit, and Toronto realized it after that war. Newark woke up in 1929. Boston and Chicago took action in 1946. Many other cities have since come to the same conclusion.

WITH a 52 per cent federal income tax rate, there is absolutely no hope of private risk capital rescuing transit from

its loss of productivity. To make the 9 per cent pay-out referred to earlier, a 23 per cent return on investment would be required, to compensate for federal and local taxes of all descriptions. In such a situation, capital amortization would be higher than operating costs.

In Cleveland, for example, a new $22 million rapid transit line was opened in 1955, under the aegis of an autonomous municipal commission. The investment is being amortized with 4 per cent interest, equivalent to under 9 cents per passenger, which eliminates any burden on the taxpayers. Had this same project been financed by equity capital, an annual net of $5,250,000, or 35 cents per passenger, would have been required. This is the measure of private capital costs, interest, income taxes, and dividends, from which the public highways are exempt.

This is not to imply that private enterprise is not competent. It just cannot work in transit any more, as it can no longer function in highways. Does anyone object because the private turnpikes and canals of the nineteenth century have been taken over by the government? No indeed. That's called progress, and what is needed is more transit progress.

RAPID transit type operations have shown truly remarkable results in the last few years. Most lines report increased traffic and revenues (without taking new extensions into account). Railroad commuter service, essentially a rapid transit operation, is the only type of rail passenger traffic to experience a growth in the present decade (and this despite increased fares, reduction in service offered, and mileage operated). (See graph.) In some areas, park-and-ride schemes, using large parking lots adjacent to rapid transit stations, have attracted significant portions of the automobile population. Such arrangements make best use of the inherent advantages of both auto and transit, and lack the disadvantages of either.

IN addition to keeping huge numbers of cars off the crowded streets, rapid transit has other advantages. It minimizes or eliminates the necessity for ubiquitous tax-free parking lots in valuable downtown locations. And it has much lower operating costs than surface transit, averaging about four mills per passenger mile, or only two-fifths as much as the typical bus service. It is true that these low operating cost characteristics are offset to some extent by the investment costs to which reference has previously been made, but the over-all costs of rapid transit are nevertheless much less than those of superhighways because of the much greater carrying capacity of the former.

Even so, it is often possible to obtain rapid transit without a large investment. The railroad rights of way in most cities fan out from the downtown districts to the principal suburban centers. They correspond to the principal traffic flow patterns in every metropolitan area. Use of these routes eliminates costly condemnation and destruction of property, excavation and relocation of sewers and public utilities, and construction of new overpasses. None of these lines are presently used to their theoretical capacity. With the addition of signaling, stations, trackage, and equipment, which could be installed at a cost much less than the construction of a parallel thruway, the rail routes could be transformed into major traffic arteries catering to people rather

than to autos. Following such a plan, Cleveland obtained rapid transit at a cost of $2 million per mile. Philadelphia is presently considering a similar arrangement, which it hopes can extend the benefits of rapid transit to suburban areas at considerably less than one-half million dollars a mile.

Other cities, such as Chicago, have found it expedient to include provision for rapid transit facilities in the design and construction of new superhighway facilities. In this manner, a single traffic artery can be adapted to peak traffic requirements without the excessive expenditure required for an all-automobile facility. Chicago's Congress Street Expressway was developed at an over-all cost of $19 million a mile. The extra cost of excavation and grading for a rapid transit right of way, included in this total, was $250,000 a mile.

On the other hand, some cities, such as Toronto, have preferred to locate rapid transit on rights of way especially developed for the purpose. The Toronto rapid transit, so designed, cost $12 million a route mile. This is well below current cost levels for urban superhighways, and of unquestionable economy by contrast with the $50 million per mile which Chicago and Boston are spending on downtown superhighway projects. The Honorable Frederick G. Gardiner, chairman of Toronto's "Metro" has said: "We consider that $1 spent on rapid transit is the equivalent of $5 spent on superhighways." Toronto accordingly is proceeding to expand its rapid transit network.

Experience has shown that appeals to the citizenry to "ride the bus and clear up congestion" are ineffective. As long as transit relies upon buses to serve heavy traffic routes, its low speeds will not attract riders; and its low productivity will not resolve transit's financial problems.

For these reasons the transit solution in every major city must be a rapid transit system of some sort. Privately owned transit companies should be encouraged to participate in the forthcoming rapid transit renaissance, as they have in Philadelphia and Newark, but the cities must lead.

Where will the money come from? The same treasury that provides highways should provide rapid transit, for they are two means to the same end. Alert cities will work to have rapid transit included in the federal highway program and alert transit managements will help them. Progressive cities will not wait on the federal government, however. Through co-operative action between local governments, enlightened transit operators, regulatory agencies, and an increasingly informed citizenry, plans will be formulated to rescue the urban man from the congestion in which he has enmeshed himself. The ultimate success of such plans is assured by the increased productivity which will follow, not only for transit, but for the entire spectrum of commercial and residential activities of the community. In every other industry productivity is measured, and increases are constantly sought. What is good for American industry will also be good for transit.

"Hard Money" and Public Utilities

Is it true that the increased cost of capital is especially detrimental to public utility operations or will it of itself result in higher operating costs? This author finds a very contrary indication; namely, that a resumption of cheap money with a probable stimulation of inflation would have a far more detrimental effect on utility economics.

By HERBERT BRATTER*

THE "money question," which on and off has been an issue in American politics since Colonial times, has been very much to the fore during most of the Eisenhower administration, and particularly this year. In certain quarters of the Congress the administration and the Federal Reserve Board have been severely criticized for their policies as they affect interest rates and the supply of capital. The criticism in the Congress, understandably, has come from Democratic circles. Early this year President Eisenhower proposed that the Congress create a national monetary commission composed of private citizens to make a thorough study of the question, but the proposal met with strong resistance on Capitol Hill. Despite the fact that administration legislators introduced bills modifying the President's proposal to the extent of including members of the Congress as members of the suggested commission, the proposition remains bogged down in both houses.

Meanwhile, the Senate Finance Committee has voted to launch a study of its own. On April 12th its chairman, Senator Harry F. Byrd (Democrat, Virginia), announced that the committee would study "the financial condition of the United States" in what would be "one of the

* Economist and author of business articles, resident in Washington, D. C. For additional personal note, see "Pages with the Editors."

broadest investigations ever undertaken by Congress." The committee, Senator Byrd said,

> will examine, investigate, and make a complete study of the financial condition of the United States, including (1) the revenues, bonded indebtedness, and interest rates on all public obligations including contingent liabilities, (2) policies and procedures employed in the management of the public debt and the effect thereof upon credit, interest rates, and the nation's economy and welfare, and (3) factors which influence the availability and distribution of credit and the interest rates thereon as they may apply to public and private debt.

THE intense interest shown by Democratic Senators in the administration's monetary policies and their effect on the cost of money and the economy in general was evident earlier in April when the same Senate committee held hearings on the Treasury's request for authority to raise the interest rate on savings bonds. During the examination of that question the principal witnesses were Under Secretary of the Treasury W. Randolph Burgess on the one hand and Leon H. Keyserling, who was chairman of the Council of Economic Advisers under the Truman administration, on the other. On the House side Representative Wright Patman (Democrat, Texas), long-time advocate of cheap money and critic of the Federal Reserve Board, has been the chief agitator of the question. There are thus numerous indications that the Democrats have settled on "hard money" as a major issue on which to attack the Eisenhower régime. In this article it is our purpose neither to criticize nor defend for any political purpose, but rather to develop a few points about monetary policy as it affects public utilities in their rôle as borrowers of capital.

Since utilities rely heavily on bond issues to finance expansion and in selling bonds have to pay going interest rates, the point is being made that Washington's fiscal and monetary policies are raising costs and that these are in turn reflected in rate increases being granted by public service commissions. Congressman Patman in May inserted in the *Congressional Record,* along with comments of his own, a *Wall Street Journal* article of March 13th headlined "Utilities Seek New Rate Increases as Borrowing Costs Rise." The newspaper article was based on a survey of more than half of the nation's public service commissions and others.

MR. PATMAN cited the article to support his contention that Federal Reserve hard money policies have been increasing costs and prices; that gas, electricity, and telephone bills are going up all across the country due to the fact that utilities have had to offer higher and higher interest rates to borrow funds needed for expansion.

"This means," continued the Texan, "that over the next twenty to thirty years, regardless of whether prices rise or fall, or whether money is cheap or dear, consumers will be saddled with the higher electric, gas, and telephone rates brought about by the hard money policy of 1955-56." To these statements by Mr. Patman we shall refer below, but first let us see some of the findings of *The Wall Street Journal's* survey.

That survey concluded that the tight money market of the past two years was

about to raise a little mischief with consumers' utility bills. Although interest rates were now tending to level off, utility borrowing costs were still holding high, and at times even rising slightly. Because of higher borrowing costs, the article continued, public service commissions were lending a more sympathetic ear to requests for higher electricity, gas, and telephone rates. For example, the chairman of the New Mexico commission told the newspaper: "We are aware of the increasing cost utilities must pay for new money and realize it can have a most definite effect upon ratepayers if the condition continues."

OKLAHOMA'S corporation commission chairman similarly said, "We give consideration to the cost of money in fixing rates, and although no utility has asked for a rate increase recently, we are anticipating them in view of the continued increase in the cost of money." Federal Power Commission Chairman Kuykendall stated: "We have several applications pending for rate increases in which current interest costs are cited." Utilities, such as the Tennessee Gas Transmission Company, are requesting higher rates to offset increases in wages, taxes, depreciation, natural gas prices—and stiffer borrowing costs. That Mr. Patman found supporting material for his contentions in *The Wall Street Journal* article is apparent.

Yet, when one examines the subject more closely the matter does not seem so simple. While it is true that the price of money is a cost of doing business for the public utility, the interest item is one of the lesser costs. The extent to which Washington policies are responsible for tight money and rising interest rates and the extent to which Washington can reverse the interest rate trend without harmful consequences are among arguable matters. As noted in the request of the Tennessee Gas Transmission Company mentioned above, interest is only one cost item; but it is by no means the largest. In the case of the Bell system in 1956, to mention another utility, interest accounted for but 2.08 per cent of all operating expenses and taxes. At the end of 1956 one-third of the system's total capital was in the form of interest-bearing debt.

IF we turn to "Statistics of Income for 1953," published this year by the Internal Revenue Service, we find some pertinent facts on the cost of borrowed money to public utilities of various categories and as a whole. On the basis of data there

COMPARATIVE EFFECTS OF INCREASES IN (A) INTEREST COSTS AND (B) OTHER COSTS IN THE FINANCING OF A PUBLIC UTILITY EXPANSION PROGRAM

	Assumptions *I*	*II*	*III*	*IV*
(1) Cost of expansion (in millions)	$ 30	$ 30	$ 37.50	$ 37.50
(2) Interest rate on borrowing (in per cent)	4	5	4	3
(3) Amortization, annual (in thousands)	$1,000	$1,000	$1,250	$1,250
(4) Interest cost, annual (in thousands)	120	150	150	113
(5) Total annual debt service cost (in millions)	$1,120	$1,150	$1,400	$1,363
(6) Annual financing cost (line 5) as per cent of such cost under assumption I	100	102.68	125.00	121.65

shown we find interest accounting for only a very small fraction of operating expenses; namely:

Net Interest Paid as Per Cent of Total Compiled Deductions in All Public Utility Corporation Income Tax Returns for 1953

Transportation	10.8
Communication	2.6
Electric and gas	5.9
Other	8.4
Total public utilities	2.9

Thus, for all public utilities, interest in 1953 constituted less than 3 per cent of total business expenses. It is unlikely that the percentage has greatly increased since 1953. The interest payments relate of course to all outstanding debt of the corporations concerned, including earlier debt contracted when interest rates were lower.

For electric utilities alone a more recent figure applying to the year ended November 30, 1956, is available in the FPC's "Electric Power Statistics" (Report No. 56-11D). Of total deductions from revenues, interest on long-term debt comprised less than 7 per cent.

"HARD money" policies of the Treasury and Federal Reserve are justified by those authorities on the grounds of leaning against the breeze of inflation. If we assume that those policies are proving more or less effective in that regard, the question that suggests itself is this: Would public utilities and their customers be better off as a result of the adoption by Washington of a cheap money policy? We may approach this question on certain assumptions set down in the table on page 82, "Comparative Effects of Increases in (a) Interest Costs and (b) Other Costs in the Financing of a Public Utility Expansion Program." For the purpose of illustration we envisage an expansion costing at today's prices $30 million, to be financed by 30-year bonds subject to regular amortization of one-thirtieth of the issue in each year. Then we make four assumptions:

I. A 4 per cent interest rate and no change in construction costs.

II. A 25 per cent increase in interest rate, but no change in construction costs.

III. No change in the 4 per cent interest rate, but a 25 per cent increase in construction costs.

IV. A 25 per cent decrease in interest rate, but a 25 per cent increase in construction costs.

As the table on page 82 shows (line 6) a 25 per cent increase in the contractual interest rate—from 4 per cent to 5 per cent—other costs remaining unchanged, increases the annual financing cost including interest payments and amortization by 2.68 per cent.

In contrast, if the contractual interest rate remains at 4 per cent but construction costs rise by 25 per cent, both annual interest charges and amortization payments must be larger, for the expansion project will cost $37.5 million instead of $30 million; and the annual financing cost is 25 per cent greater than under our first assumption.

Therefore, if the monetary policy of Washington is aimed at preventing inflation and succeeds in doing so, to that extent it avoids a greater evil at the cost of a lesser one. Certainly a 25 per cent increase in the price level—*i.e.,* in the cost of goods and services—would be far more expensive to utilities having to borrow and to their customers who have to pay rates that take all costs into account than would be a 25 per cent increase in the cost of

Public Utility Rates

"*It has been suggested that higher interest rates lead to substantial increases in public utility rates. This sounds plausible because public utilities rely heavily on bonded indebtedness. However, the latest figures available indicate that the net interest expense of public utilities is still less than 4 per cent of gross revenue—the same proportion as in 1952. Even for electric utilities, where average interest cost on long-term debt now exceeds 5 per cent of gross revenue, the relative cost of interest has risen very slowly. The estimated average of 5.2 percent for both 1955 and 1956, compares with 4.8 per cent in 1952 and 5 per cent for 1946.*"

—GEORGE M. HUMPHREY,
Secretary of the Treasury.

long-term money. Cheap money facilitates inflation. If the money supply is artificially increased the resultant spending by the people and business will certainly tend to raise prices and costs. Under the fourth assumption in the table we see the effects of a 25 per cent lowering of the contractual cost of money to finance the expansion coupled with a 25 per cent increase in all other costs of the expansion. The net result is a 21.65 per cent increase in annual financing costs. Even a very small percentage increase in construction costs would obliterate everything saved by bringing down the contractual interest rate by 25 per cent. Such a reduction in the contractual interest rate would save only $30,000 a year over the 30-year period if other costs remained unchanged. But the latter is a very unsafe assumption today. Since other costs would rise, the lower interest rate would have to be applied to a larger principal sum while the annual amortization would be increased.

It follows that, if public service commissions are granting utilities rate increases on the basis of higher operating costs, they are responding far more to the results of inflation than because of dear money.

Higher interest and other costs are, of course, of concern to the public utilities but they are of no less concern to the ratepayers to whom public service commissions have to pass them along. Congressman Patman focuses attention on the effect of higher interest rates on the cost of living by way of higher utility rates. An important omission from the Texan's argument, however, is the effect of inflation on the general cost of living. If 90 per cent or more of the cost of doing business in the utility field is increased as a result of inflation, the public which uses utility services will be much harder hit than it is by an increase in interest rates affecting 10 per cent or less of the costs entering into the utility rate structures. If the so-called "hard money" policy results in holding back general price inflation it is doing the utility customers a greater service than would be the case were the interest rate held down artificially in a time of great competing demands for capital funds. Many readers of arguments like that of Congressman Patman quoted above will be persuaded by it unless the alternative just mentioned is pointed out to them.

This is not to say that Washington's monetary policies have been completely successful in suppressing inflation. While interest rates have risen, so too, latterly, have the cost of living and the general price level.

If we are to have both dear money and inflation, what is the good of Washington's "sound money" policies? If the policies are not effective, why not give them up? The answer to these questions is that half a loaf is better than none. The monetary authorities, at least in the Federal Reserve System, profess to be neither all powerful nor omniscient. There are important elements in the money market which are beyond the reach of central bank monetary policy. A major contributor to our current inflation with rising costs is the wage-price spiral, over which the Federal Reserve has no control. Inflation is fed, also, by spending by the government for goods and services which do not find their way onto our markets: defense spending and the various forms of foreign aid and the proceeds of foreign loans. The existence of inflationary pressures from these and like sources is all the more reason for discouraging inflation in areas within the reach of the monetary authorities.

Actually, in recent months, the Federal Reserve Board has been neither tightening nor easing the money supply, but has been following what it calls a "passive" policy. A pertinent explanation is given by the board's vice chairman, C. Canby Balderson, in a recent address from which we quote:

> Monetary policy by restricting the supply of money and credit cuts down spending by increasing the price of money, the rate of interest. In effect, this substitutes an increase in the price of money for an increase in the price of goods. The allocation of the available supply of money and credit is then left to market forces, going to those bor-

rowers who are willing to pay the higher price for borrowed money. This use of rising interest rates to exclude borrowers from the market is that which is most consistent with a free market system. The "tightness" of money over the past year has resulted not from actual restriction on the supply of money and credit in being but from increased demands of borrowers. If the supply of credit had been allowed to increase to satisfy all demands, it would only have added to inflationary pressures without adding to the supply of goods, and prices would have shown an even greater rise.

The price rise, coupled with the expectation of further inflation under a weak monetary policy, would activate borrowing and spending, as I indicated earlier, and would still further multiply credit demands. Sooner or later, lenders would become increasingly reluctant to lend, at least insisting on an interest premium to compensate for the purchasing power depreciation of the dollars lent. Thus, eventually in inflation, even interest rates get out of control, and rise because of inflation-generated demand and supply forces. It is a fallacy to think interest rates can be kept low by government fiat. The forces making interest rates are elemental, all-pervasive forces.

THERE is no question that, as money rates have risen, utilities have had to pay more for their borrowings during recent years. In part this may be due to the attitude of regulatory authorities which must approve proposed utility bond issues. The cost of long-term bond money to public utilities is reflected in the series covering 30-year first mortgage electric power bonds reported in Moody's *Bond Survey,* for Aa and A-rated bonds. Throughout the current "hard money" period, new issues of such bonds have had to yield a varying fraction of a per cent more than the average actual coupon on corresponding outstanding issues of electric power bonds. As of this writing, in recent weeks and months the differential has ranged from 43 basis points on February 27th to 62 on January 8th. (One hundred basis points equal one percentage point.) Thus, on February 27th outstanding Aa-rated electric power bonds with an average maturity of twenty-seven years were selling on the market to yield 3.79 per cent, whereas the new offering of that date yielded 4.22 per cent, a difference of 43 basis points.

In 1949 and 1950 new electric utility

¶ *"... if the monetary policy of Washington is aimed at preventing inflation and succeeds in doing so, to that extent it avoids a greater evil at the cost of a lesser one. Certainly a 25 per cent increase in the price level—*I.E.*, in the cost of goods and services—would be far more expensive to utilities having to borrow and to their customers who have to pay rates that take all costs into account than would be a 25 per cent increase in the cost of long-term money. Cheap money facilitates inflation."*

bond issue yields showed no such differential. Twice in 1951, in the spring and fall, a differential of about 25 basis points (one-half of one per cent) appeared. Through mid-1952 new issues carried a differential of about 17 or 18 basis points. In 1953, when the Eisenhower administration offered its first long-term bond with a 3¼ per cent coupon, the electric power differential on new offerings rose to about 30 basis points, easing later in the year. In 1954, a year of economic readjustment, there appeared no differential to speak of; all issues offered were readily taken. In 1955 the differential again appeared, approximating 10 basis points. But in 1956 a climb began, from 3 points in February, culminating in a high of 62 points on January 8, 1957. On April 3rd the corresponding figure was 50 points.

ONE Washington financial observer, asked why utility borrowers should be having to pay a differential or premium above yields on outstanding bonds, suggested two possible explanations. First, underwriters want to be sure to get rid of an issue and are afraid to bid close to outstanding yields in a tight money market.

Secondly, since new issues are sold close to par, their yields are close to their coupons, whereas older issues, sold when money was cheaper, are selling considerably below par. Investors buying the older issues, therefore, need to pay only the capital gains tax on that part of the yield to maturity due to appreciation of market value to par. In other words, to compensate for that advantage of older issues, borrowers on new bonds must pay a little more.

Another technical consideration which may to some extent affect the cost of utility bond financing is related to the call provision included in some indentures. Some long-term investors, notably insurance companies, seek to avoid having their bonds called as a result of changes in money rates in the direction of ease. They have been successful in obtaining certain industrial bonds containing a 10-year "no call" provision. For instance, the Commercial Credit Company in September, 1956, sold a $75 million 4¼ per cent issue of 1974 with such a provision. But utilities avoid "no call" commitments. Thus, in May, 1953, when money was tight, the Pacific Gas and Electric Company sold $63 million of callable bonds due in 1984 with a 4 per cent coupon, but one year later refunded the issue at 3⅛ per cent. Similarly, the California Electric Power Company in April, 1953, issued $8 million of 3⅞ per cent bonds due in 1983, but eleven months later called them and in their place issued $8 million of 30-year bonds bearing a 3¼ per cent coupon. Utilities are encouraged by regulatory authorities to preserve their freedom to take advantage of favorable refunding opportunities, but this freedom may be reflected somewhat in the cost of utility bond issues.

REPRESENTATIVE of the attitude of regulatory bodies on this point is the following statement excerpted from a February 28, 1956, notice sent to electric, gas, and telephone utilities by the Georgia Public Service Commission in regard to restrictive call premiums of bond indentures:[1]

Any restrictions on the calling of

[1] Re Restrictive Call Premiums on Bond Indentures, 12 PUR3d 503.

bonds for redemption where a lower rate of interest can be obtained is contrary to the public interest. Cost of capital is a significant factor in the determination of fair rate of return. Under normal circumstances fair rate of return should be based upon cost of capital.

Since rate of return is an element of the over-all cost of service, the level of the rate of return will affect the level of rates for service. If a decrease in interest rates would make possible a lower cost of capital to a utility through a refunding of its long-term debt, there should be no arbitrary restrictions which would prevent the refunding.

Federal agencies take a similar view of the public interest in this connection. In its May 9, 1957, order relating to the Black Hills Power & Light Company proposed financing, the Federal Power Commission said:

> The commission notes that the provision in the bond indenture requiring a higher redemption price for the first five years results in substantially restricting the right of the applicant to call the bonds for redemption during this initial period. Nevertheless the applicant is in immediate need of funds. . . . However, the commission wishes to make it abundantly clear that while it approves the applicant's issue under the peculiar circumstances here present, the commission will not in considering bond issues in future cases look with favor upon a restriction which directly or indirectly limits the rights of a public utility to refund bonds at lower interest rates or which otherwise unreasonably limits the right of redemption.

Under the Holding Company Act, the SEC is required to concern itself with the prices at which bonds, debentures, and preferred stock may be redeemed for refunding purposes. The commission has expressed itself on this subject on various occasions. Of special interest is the long discussion handed down in 1955 in the findings and opinion on American Natural Gas Company-American Louisiana Pipe Line Company (Holding Company Act Release No. 12991).[2] In February, 1956, the SEC announced adoption of policy regarding preferred stock subject to the 1935 Holding Company Act (Release No. 13106) providing that such stock be redeemable at any time upon reasonable notice and with reasonable redemption premiums, if any.

In February, 1957, the then SEC chairman discussed the subject before the New York Society of Security Analysts, reiterating the general policy that bonds and preferred stocks be subject to call and adding that the SEC will consider each case that comes before it in the light of all the pertinent circumstances. He stated:

> Because of the great importance of this question of redemption prices for refunding purposes in periods of high interest rates like the present, we are glad to learn that the Life Insurance Association is sponsoring a comprehensive study of redemption provisions and their effect on the offering prices of securities by the Wharton School of Business Administration of the University of Pennsylvania.

Another matter worth noting in con-

[2] Re American Nat. Gas Co. 11 PUR3d 62.

nection with the subject of this article is the REA's rôle as a lender at low rates. In his Budget Message in January, President Eisenhower announced that the administration was reviewing interest rates charged by government lending agencies—such as REA—under statutory authority. Various maximum statutory interest rates were fixed when interest costs were much lower than today, the President pointed out. REA today lends to electric co-operatives and to small phone companies at its statutory maximum of 2 per cent, whereas the Treasury has to pay 3¼ per cent or more to raise the money with which to finance agencies like REA. Thus, borrowers from REA are receiving an interest rate subsidy of about 1¼ per cent per annum. That subsidy would be less conspicuous were money generally to become easier and interest rates to decline. This may be a consideration in the agitation for cheap money in certain circles.

In February Congressman Edgar W. Hiestand (Republican, California) introduced a bill (HR 4781) to amend the Rural Electrification Act of 1936. One of the bill's two purposes is to remove the above-mentioned REA interest rate subsidy. Mr. Hiestand's bill, which is now before the House Agriculture Committee and which undoubtedly has administration approval, although it is not an "administration bill," would amend the law by substituting for the mandatory 2 per cent interest rate provision the following language: ". . . shall be at a rate of interest equal to the average rate of interest payable by the United States on its obligations, having a maturity of ten years or more after the dates thereof, issued during the last preceding fiscal year in which any such obligations were issued." This bill is directly in line with the recommendation in the Budget Message cited above and ought to be enacted.

Since Washington monetary policy is or has been made a controversial subject we may expect that those who oppose what the Federal Reserve Board and Treasury have been doing will direct their appeals to influential sectors of the electorate: to veterans and other mortgage borrowers, groups interested in the financing of schools, hospitals, and other local, state, and other construction projects dependent upon borrowed capital, and the many small customers of electric, gas, and telephone utilities. In listening to such appeals it would be well to bear in mind that they are sometimes based on serious misconceptions.

As we have seen in this article, for example, while the cost of borrowed money is a consideration which public service commissions do—and indeed must—take into account in considering applications for rate increases, that cost is only a relatively minor fraction of total costs in the public utility business.

Similarly, we have seen that utilities which borrow through bond issues incline to reserve the right to refund such issues in case money later becomes cheaper; and in fact regulatory agencies, state and federal, generally make the reservation of this right a requirement. While such a policy on the part of the borrowers may slightly increase the cost of borrowing through bond issues or otherwise make the money harder to get, it is a misconception to say that "over the next twenty to thirty years . . . whether money is cheap or dear, consumers will be saddled with the higher

. . . rates brought about by the hard money policy."

Also we have noted above that the alternative to a monetary policy of resisting inflation is inflation itself and that the burden of inflation as reflected in utility operating costs, and hence in rates, can be many times greater than the effect of the dearer money we have been experiencing in the last few years.

We should note, furthermore, that the implication in the phrase "brought about by the hard money policy" is certainly an arguable proposition and we should also keep in mind that the money supply and interest rates are affected by two rather separate sets of Washington factors.

The Federal Reserve Board, which in various ways acts to stabilize the money market and supply of funds, is in discussions frequently lumped together with the administration. Actually, the board is an independent agency of the Congress chairmanned, as it happens today, by a Democrat. The Treasury Department in its public debt operations and other federal agencies engaged in lending money, influence the interest rate and the supply of funds in other ways; ways over which, incidentally, the Federal Reserve Board has no control. Spending and tax policies of the Congress also affect the interest rate.

An administration spokesman, Treasury Under Secretary W. Randolph Burgess, in December put the matter as follows:

> A few months ago all too many people believed that "tight money" was simply a result of policies pursued by the Federal Reserve System or by the Treasury. . . .
>
> The basic cause of "tight money" is a great and abundant prosperity, and high confidence in the future. This means a demand for money which is in excess of the amount of money the people are saving. That is the real reason why the price of money is high and why it is less readily available. . . .

So long as the general demand for capital remains strong, money will continue hard to come by and utilities, like other borrowers, will have to pay the going rate when offering bonds. There are no signs of a change in official Washington monetary policy. Were a policy of "active ease" to be substituted for present policy under present economic conditions of full employment the consequent rise in the price level would put a much greater burden on utilities and their customers than do today's high interest rates.

"Rational *analysis of the economics of the oil-depletion allowance confirms the verdict of experience. Against the existing legislative background, oil has taken its place among the great epics of American enterprise and welfare. Nothing could be more shortsighted than to jeopardize the future of a resource so vital to prosperity and national security by changes that cannot be justified even on theoretical grounds. Adequate production has always been a direct function of economic incentive."*

Excerpt from "The Guaranty Survey"—
published by Guaranty Trust Company
of New York.

REA Comes of Age

An interesting summary, using a rather unusual approach reviewing the present status and future outlook of REA. To the question is it coming or going, the answer seems to be a qualified "both."

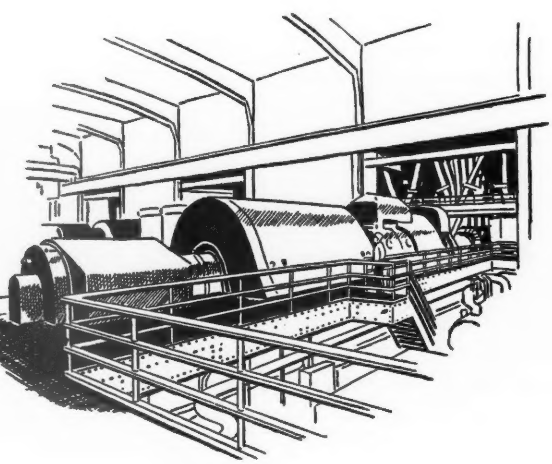
By JOHN J. HASSETT*

On May 20, 1957, the Rural Electrification Administration, brain child of Morris Llewellyn Cooke and incubated by the New Deal, reached a status roughly equivalent to manhood—twenty-one years of age. It has led a tumultuous life to date, and there are those who say its best (and worst) years are behind it.

In its two-score years and one, the REA has been orphaned and adopted, loved and hated, coddled and investigated, praised both lavishly and with faint damns, and excoriated with sulphurous indignation. Its next twenty years can hardly be as colorful, but then you never know. One thing seems certain: Although its primary objective has been largely accomplished, REA is here to stay.

The Rural Electrification Administration was created to make loans for the development of electric power systems in rural areas, first by Executive Order No. 7037 of May 11, 1935, and officially a year later by passage of the Rural Electrification Act of May 22, 1936. Originally an independent agency of government, it became a part of the Department of Agriculture in 1939, and it has operated ever since under that vast department's aegis and protection. It was initially intended to exist for only ten years, but the time limitation was removed from its lending pro-

* Professional writer, resident in Gaithersburg, Maryland. For additional personal note, see "Pages with the Editors."



gram in 1944, and there is no indication of its demise on the horizon. For REA has found itself a prominent niche in America's rural power and communications picture.

LOOKING upon its youthful accomplishments, there can be no doubt that REA has had a profound effect on farm economy over the past twenty years. The volume of dollars spent for construction of power lines and other electric facilities has gotten the job done. Nearly three and a half billion dollars in loans, together with the substantial expansion of business-managed, tax-paying utilities over the same period, has lifted the number of farms enjoying electricity from 10.9 per cent of all farms in 1935, to approximately 95 per cent of all U. S. farms today.

More than a thousand co-op borrowers, representing perhaps five million farmers, have drawn from the REA till during those twenty years. Eighty borrowers have already paid off their loans for distribution, transmission, generation, and consumer facilities, while only two loans have been foreclosed.

This in itself has the makings of an heroic story of industrial accomplishment, and such it is. But it would be misleading to leave the impression that these millions of farmers voluntarily took the initiative (in high dudgeon) and straightway solved their immense power supply problems in a short span of two decades, with little help from anyone. The real story of REA lies in the paternalistic framework of government aid and assistance which was built and maintained at government expense to organize, then direct, farmers into power co-ops eligible for loans, and ultimately to guide their management and operations for years and years. Private power interests have a word for this service—"spoonfeeding." The writer leaves to your judgment the justification and merit of the scheme, and the question of who should take the bows for it.

ON the eve of its twenty-first birthday, the REA presented the classic picture of the government agency starting as an emergency element during the depression, obtaining temporary status through legislation, and finally emerging as a permanent, immutable monolith of bureaucracy. REA was perhaps the original "camel's nose under the tent," to borrow the utilities' idiom. Created by Executive Order of Franklin D. Roosevelt, REA came into existence under authority of the Emergency Relief Appropriation Act which had been signed into law a month earlier. It received an initial allocation of $100 million to try and help alleviate unemployment by bringing electric power to rural areas. Almost immediately, it ran into trouble.

REA's job was to execute a 10-year program by making interest-bearing loans, repayable within twenty-five years, to local interests so organized as to make them eligible borrowers of public funds, with preference to be given to public bodies and co-operative, nonprofit, and limited dividend associations under state laws. Administrator Morris Llewellyn Cooke opened a suite of offices in the basement of the old Interior building in Washington with Secretary Harold Ickes' blessing. Cooke built a small staff, then tried to find ways to get his money into hands that could spend it. It turned out to be quite a problem.

MOST relief projects were then operating through grants or grants-in-aid, supplying funds directly through subsidy. REA found that there was no satisfactory way to provide grants for its projects, because of existing Executive orders specifying how relief funds were to be spent. For example, it was required that 90 per cent of labor be procured from relief rolls. Since power construction required skilled labor, there was none available in the areas where rural power lines were feasible. REA could not give the money away through grants, and there was some doubt that it could lend the money legally. This lending authority eventually was supplied by the Comptroller General's office three months after REA was created, and a new Executive Order of August 7th set the permanent pattern for REA as a lending agency, under which it has operated substantially since.

Now REA had to find eligible borrowers who were technically competent to build and operate an electric system. It had received hundreds of inquiries from farm areas, wanting to know how to qualify for loans. Its answer was simple to give, but impossible to carry out. Interested groups would have to organize local corporations under state laws. "O.K. How do we do it?" they asked. This posed so many difficulties that most embryo power organizations got nowhere at once. Delays were not aiding employment, since funds stayed in the Treasury. Power-minded New Deal Senators and Congressmen began to fret over failure of relief efforts in this field to relieve anybody.

IN midsummer of 1935, the privately owned power industry made an offer of a co-operative program utilizing $113 million of private capital for construction of rural lines, in co-operation with loans of $124 million from REA and other federal agencies, to be advanced as credit to customers for house wiring, service extension, and electrical appliances. This proposal was turned down by the Administrator, who referred the matter of appliance credit to another bureau, and attacked the rate structure of existing utilities as discriminatory toward rural service extensions. This was the culmination of several industry meetings with REA officials, ostensibly to explore ways and means of getting loan funds into circulation

A review of published material on these REA-industry relations at the time suggests a certain amount of stalling and maneuvering. Utilities were under heavy

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attack by the New Deal as a result of financial manipulations having nothing to do with electric rates and service, so that suspicion of government attitudes was paramount. For his part, Mr. Cooke later wrote with pride that he and a coterie of dedicated men saw REA as the means to inject a competitive system of public ownership on the American economy in order to bring about changes in utility service which he felt were limiting power expansion. Cooke's list of dedicated men included F.D.R., Senator George Norris, who authored the REA bill in 1936, then Governor Gifford Pinchot of Pennsylvania, and many others.

In a letter to Senator Norris on November 14, 1935, Mr. Cooke wrote:

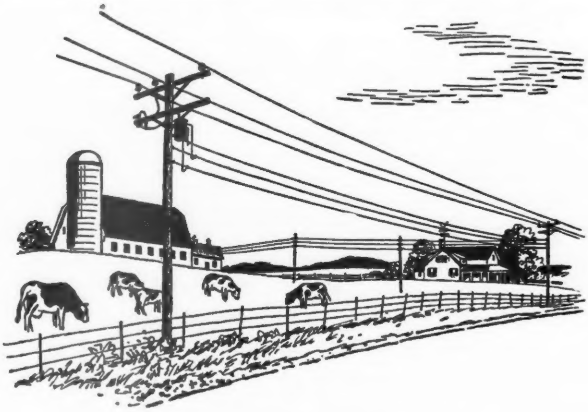
> The experience of REA indicates that this limitation on the extension of electric service in rural areas has been due to prohibitive costs of line construction, to excessive demands for cash contributions from farmers to pay for the lines which would serve them, to high rates which discourage the abundant use of current, and to the traditional policy of the private utilities of extending their monopolistic franchises as widely as possible, while extending their actual service only to those areas which are most profitable.

It would be naïve to suppose that this group of zealots would relinquish the weapon of competition once it had been placed in their hands by Executive Order. From this point on, REA and the private utility industry went their separate ways.

By the end of 1935, REA's course was clear. The Administrator in his first report reluctantly admitted that not even a substantial portion of available funds would be utilized for rural electrification. "Farm organizations of a co-operative character forged to the front as the principal borrowers under the REA program," stated the report.

Five months later, the Rural Electrification Act squeaked through the Senate committee by one vote, passed Democrat-controlled Senate and House without difficulty, and became law. REA took on a tough task of farmer education. First it had to sell the farmer on the advantages of electricity on the farm. Then it had to show him how to organize his group to be eligible for loans, how to design and build a system, how to operate it and make a profit, how to keep its books, render its bills, pay its staff, plan its future. It took several years for REA to discover and organize this know-how, both to direct its own operations and to pass the information along to the borrowers. The result was that REA had to develop a Svengali-Trilby relationship with each and every potential borrower on a custom, hand-tailored basis, for every system had its own problems, and every system had to pay back its loans and be economically sound. At one and the same time, REA went into the promotion business, the power construction business, the legal counseling field, the engineering profession, and the accounting industry, to supply specialists on call to create a market for its power funds.

Most of this service and assistance are still available to co-ops, and, of course, many of them use it. These services are not included in the cost of the loans made to the co-ops. They are mostly rendered free or at out-of-pocket cost to the borrower. These costs are an overhead



Farm Power Use Forges Ahead

"FARM use of electricity actually is advancing more rapidly than urban and suburban use. Farmers are constantly finding new ways to substitute electric power for their own muscle power. Originally, REA sold the idea of power to the farmer in terms of lighting his home and his barn. The rule of thumb or catch phrase most frequently used was 'You can buy 40 kilowatt-hours for $3.50 a month.' Now the average farm use of electricity is 250 kilowatt-hours per month and it is still going up. Dairy operations now are almost entirely done by automation."

charge appropriated for in full by the Congress for the REA staff. Since the end of World War II, there has been increasing pressure in Congress to make co-ops self-sufficient and more independent. Some of the early borrowers are well along in their repayment schedule by this time, and they have shown a tendency toward freedom of action, now that they are in an earning period. At Congress' direction, REA has required some co-ops to pay for outside services instead of receiving them gratis from Washington. While these instances are not common as yet, more and more of them are likely to be reported as co-ops mature in age and wisdom and experience.

REA borrowers have also benefited from a wartime change in the act which reduced the rate of interest on REA loans from 3 per cent to 2 per cent, and extended the allowable time for repayment to thirty-five years. This was done in 1944 to ease the repayment burden on systems which were straining to connect every possible customer so that wartime goals of farm production and rural industry could be met with existing power facilities. The 2 per cent rate has been attacked by the Hoover Commission to Reorganize the Government as unrealistic. It has constantly been challenged by substantial congressional blocs on the ground that the rate does not return the cost of such money when borrowed by the government.

In the President's Budget Message this year a direct reference to this unrealistic interest rate was made, and there was speculation that Congress would take a serious look at all power loans in the light of the present cost of money. Of course, the same criticism is leveled at so-called self-liquidating loans for power at federal construction projects now being operated by the Reclamation Bureau of the Department of the Interior.

However, the hue and cry over the immensity of the entire federal budget and the administration's reaction to proposed cuts made in it, have completely overshadowed the interest rate matter, and there seems little likelihood of its getting a hearing in the present Congress, at least this year. REA, like other federal power and lending agencies, has adopted a passive point of view toward interest rate proposals. Officials confidently expect to ride out any storm that may develop over the issue.

One reason for the unruffled calm of REA officials before Congress is the projects' political popularity. Thanks to some strenuous lobbying activities by the co-ops' own organization, the National Rural Electric Co-operative Association, and the judicious spreading of projects through every state in the Union, Congress has always been generous with lending funds for REA. In only four years has REA received less than $100 million in lending authorization, and these were all war years, when supplies were not available anyway. In the six lush growth years of our peacetime economy from fiscal 1946 through 1951, REA was granted $2,084,000,000 for power loans.

Since then, with most of the physical job of the new line building done, REA authorizations have leveled off at between $100 million and $214 million annually, except for 1953, during the Korean conflict. The current fiscal 1958 budget estimate is for $179 million, most of which seems fairly safe from congressional axes. These funds are mostly aimed at "heavying up" existing systems, installing three-phase lines for more electrical use per farm, and bigger transformers. REA's current existence is now geared to improving the quality of service, and, according to present REA Administrator David Hamil, "The co-ops, like most private companies, will probably never finish refurbishing and improving their lines and service."

Farm use of electricity actually is advancing more rapidly than urban and suburban use. Farmers are constantly finding new ways to substitute electric power for their own muscle power. Originally, REA sold the idea of power to the farmer in terms of lighting his home and his barn. The rule of thumb or catch phrase most frequently used was "You can buy 40 kilowatt-hours for $3.50 a month." Now the average farm use of electricity is 250 kilowatt-hours per month and it is still going up. Dairy operations now are almost entirely done by automation. Kitchen and household appliances are as common on the farm as in the city, and the generation of farm youngsters which has grown up with power has learned many new ways to utilize it.

This rapidly rising standard of living on the farm has also been reflected in the entry of REA into the rural telephone field, which was accomplished by act of Congress in 1949. Unlike the rancor that

accompanied the founding of REA originally, the telephone program from the very first has been founded on co-operation between the existing companies struggling manfully to cover the field, and the consumers who wanted quality service at reasonable cost.

The rural telephone statute contains no provision for loans to public bodies or for preference to be given to any particular group or organization. During the early years of the rural telephone program, there was a specific requirement that loans be given first to those already providing telephone service in an area. As a result, the number of telephone loans made so far has been predominantly to private companies rather than to co-ops. It is interesting to speculate how much progress might have been made in the power field since 1936 had government and industry worked together as a team.

PROGRESS to date in the telephone field after six years has been steady but not spectacular. Material and skilled manpower shortages persist, so that top lending authorization in any fiscal year so far has been $80 million. There have been some technical and legal requirements that have slowed service extensions and improvements. For instance, it has been necessary to process many applications through state regulatory commissions. Also, since existing telephone franchises are being respected, there has been much negotiation and occasional litigation over some new lines and extensions. For REA's part, it has made no distinction between applications for loans from co-ops and companies, considering only rates and the fiscal soundness of the proposals.

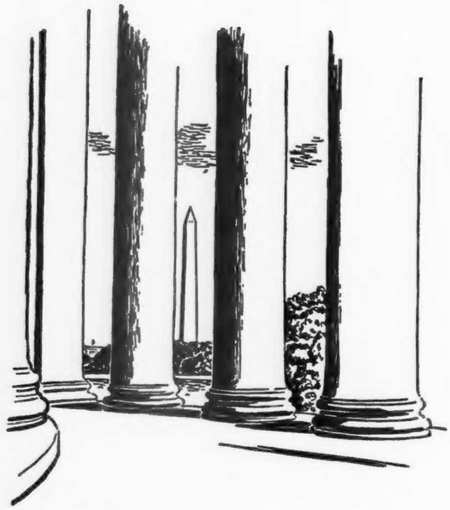
It would seem that REA and its policies have mellowed over the years. The changing administrations have had an influence here, as well as the changing times. If this be so, where does REA go from here, now that it is of age?

Taking for granted its continued existence, there are both obstacles and opportunities in its path. In the power field, the ever-expanding farm market looks juicy enough to claim future appropriations as hungrily as before.

Although the actual number of farms is declining, more electric equipment is being used on the farm, while farms get bigger and use even more power per acre. More city folk are moving into the country with still higher standards of electric living.

IN the telephone field, the communications program is still in its infancy. If American prosperity continues high, there will exist a continuing need for similar saturation coverage of rural telephone service. Certainly the pace of this expansion will be slower than that of electricity, because the urgency is not so acute and because equipment and man power are not readily available, as in the thirties.

The obstacles lying ahead are not major ones, barring an over-all economic slump. Congress may raise questions about the propriety of continued "mother hen" operations of REA for its borrowers, and about the justification of the 2 per cent interest rate. Responsible solons may ask such questions, but apparently no one in authority is going to answer them emphatically enough to bring about a change. That is the way things are today. In retrospect, they could be a great deal worse.



Washington and the Utilities

Niagara Decision Puzzle

THE recent decision (2 to 1) of the U. S. circuit court of appeals for the District of Columbia regarding Niagara power development has left a number of questions concerning pending legislation. The majority of the court decided that the Federal Power Commission has full discretion and responsibility for licensing Niagara power development, notwithstanding the 1950 treaty provision reserving this authority to Congress.

The majority opinion, by Judge Bazelon, dismissed the reservation in the 1950 treaty with Canada as merely an expression of domestic policy which was independent of the binding provisions of the treaty itself. Now Congress is faced with the problem of disposing of a bill, already approved by a Senate committee, which purports to exercise the authority reserved in the 1950 treaty. This bill was the result of a compromise over a preference clause provision which would authorize the New York State Power Authority to develop Niagara power and sell part of it to private companies and part to government agencies under a preference clause.

The issue in the court case turned on the treaty reservation which said that "no project for redevelopment of the United States share of such (Niagara) waters shall be undertaken until it be specifically authorized by act of Congress." Judge Bazelon, speaking also for Chief Judge Edgerton, held that the reservation was an expression of the Senate's desires, but not a part of the treaty. Dissenting in the decision, Judge Bastian held that the condition the Senate attached was germane to the subject matter of the treaty, and that "if but for its condition being given effect the Senate would not have consented to the treaty—then regardless of what the language in question is called it must be given effect."

THE majority noted that "No court has ever said . . . that the treaty power can be exercised without limit to affect matters which are of purely domestic concern and do not pertain to our relations with other nations." In this connection it is interesting to read Justice Black's opinion in the U. S. Supreme Court decision of June 10th in the case of Reed *v.* Covert & Smith. There the Supreme Court said that "no agreement with

a foreign nation can confer power on the Congress, or on any other branch of government, which is free from the restraints of the Constitution."

There are three courses now left open to clear up the Niagara power problem. The first could be a request for a review of the decision by the full panel of nine judges of the U. S. circuit court of appeals, with the prospect of further appeal to the U. S. Supreme Court. This would delay final action until next year at least, and the Niagara power is badly needed as soon as it can be developed.

A second course would be for Congress to go ahead with pending legislation. Passage of the compromise bill now before the Senate would probably have the effect of rendering the court's decision moot, because if Congress can delegate authority to the FPC in the Federal Power Act, it can also take it back by special legislation. The third alternative would be to let the decision stand and permit the FPC to reconsider the application of the New York State Power Authority for a license.

The Senate Public Works Committee on June 24th approved a compromise proposal to give New York state authority to build a $600 million Niagara Falls power plant. The measure is substantially the same as one approved earlier by a subcommittee headed by Senator Robert S. Kerr (Democrat, Oklahoma). Senator Dennis Chavez (Democrat, New Mexico), chairman of the full committee, announcing the group's action, gave this breakdown of the measure:

HALF of the total estimated project power—about 1.8 million kilowatts—is reserved for preference users. Twenty per cent of that amount would be available to Ohio and Pennsylvania for use by public bodies and nonprofit organizations. The other half of the project capacity would go to commercial users with 445,000 kilowatts assigned to the Niagara Mohawk Power Corporation.

The allocation to Niagara Mohawk replaces the generating capacity the company lost as a result of a June 7, 1956, rock slide at the falls. In return, Niagara Mohawk gives up its rights to use of Niagara river water.

The plant would be built, maintained, and operated by the Power Authority of the State of New York. The authority is now constructing the American portion of a comparable project in the International Rapids section of the St. Lawrence river.

Both Senators Chavez and Kerr expressed hope that the bill will be brought up for prompt action by the Senate. It then would go to the House.

Hell's Canyon Upset

THE unexpected reversal of votes by southern Senators who voted against a bill to authorize a federal dam at Hell's Canyon last year strongly suggests a trade on other legislation, even though denied by those Senators. An analysis of the Senate vote (45 to 38) in favor of the federal project indicates that the votes of several southern Democrats were traded in return for support of the southern position on civil rights legislation. There was also evidence of an organized effort by the Senate Democratic leadership to embarrass the administration and perhaps create an issue for use in the coming election year. Expectation that President Eisenhower would veto the Hell's Canyon bill if it is approved by the House was also thought to have been a factor with some Senators.

The bill now goes to the House where it will be taken up first by the House Interior Affairs Committee, headed by Rep-

resentative Engle (Democrat, California), a supporter of the project.

Ignoring the surprising vote in the Senate late last month authorizing the federal project, the House Irrigation and Reclamation Subcommittee refused (15-12) to report a similar measure to the Interior Affairs Committee. The subcommittee's vote is regarded as a fair test of the opposition's strength and probably kills any Hell's Canyon bill.

Those Senators previously opposed to the federal project, who switched their votes last month, were as follows: Eastland (Democrat, Mississippi), Long (Democrat, Louisiana), Ervin (Democrat, North Carolina), Smathers (Democrat, Florida), Russell (Democrat, Georgia), Smith (Republican, Maine), Aiken (Republican, Vermont), and Thye (Republican, Minnesota, who was paired for the bill). In contrast, the following "liberal" Democratic Senators, ordinarily favoring civil legislation, voted unsuccessfully along with the Southerners to block a move to send a House-approved civil rights bill directly to the floor of the Senate, bypassing the Senate Judiciary Committee: Magnuson (Washington), Mansfield (Montana), Morse (Oregon), Murray (Montana), and O'Mahoney (Wyoming).

The president of Idaho Power Company claimed his company's decision to return to the federal government the fast tax write-off certificates for construction of two Snake river dams was made without any advice from government officials. In a telegram to Chairman Kefauver (Democrat, Tennessee) of a Senate Judiciary subcommittee, T. E. Roach, the utility's president, said: "We have not had any contact, conference, or consultation with any official of the executive branch of the government."

"Nor has anyone else done so for us," he added.

Mr. Roach returned to the Office of Defense Mobilization, on the eve of the Senate vote on a federal Hell's Canyon dam, two certificates that would have allowed Idaho Power to write off at an accelerated rate for tax purposes about $65 million of the $103 million cost of two of three dams it has been licensed to build along the Snake river between Idaho and Oregon. Mr. Kefauver had wired Mr. Roach earlier, asking him whether any White House or other government official had been in touch with him on giving up the fast amortization grants.

New Nominations

Another former state commission chairman has been named to a federal commission post by President Eisenhower, following a precedent established in earlier appointments. Edward N. Gadsby (Republican) of Boston, Massachusetts, attorney and a former chairman of the Massachusetts Department of Public Utilities, is slated to succeed J. Sinclair Armstrong as chairman of the Securities and Exchange Commission. (Armstrong has already moved over to the Defense Department where he is now Assistant Secretary of the Navy for Finance.) Gadsby's appointment, when officially announced, will require the confirmation of the Senate.

Andrew D. Orrick, a Republican, was sworn in last month as a reappointed member of the SEC. Orrick, who has served out the unexpired term of former SEC Chairman Demmler, was renamed to a full 5-year term on the SEC, expiring in 1962.

Two former Truman administration officials have been named by Eisenhower to fill Atomic Energy Commission vacan-

cies. John S. Graham (Democrat) of North Carolina was named to replace Democratic Commissioner Thomas E. Murray. John F. Floberg (an Illinois Independent) would fill the unexpired term (to 1959) of the late Commissioner John von Neumann. Graham was formerly an Assistant Secretary of the Treasury. Floberg was a former Assistant Secretary of the Navy for Air. The term of former AEC Commissioner Murray, often critical of AEC Chairman Strauss, expired on June 30th. Senate hearings on the Graham and Floberg nominations may be lengthy because of the support for reappointment given outgoing Commissioner Murray by some leading liberal Democratic Senators. Confirmation of Graham and Floberg is anticipated.

Commissioner John C. Doerfer was designated chairman of the Federal Communications Commission when former Chairman George C. McConnaughey resigned that post a few days before his term would have expired. McConnaughey is returning to private law practice in Columbus, Ohio, where he was once chairman of the Ohio Public Utilities Commission. He had asked President Eisenhower not to consider him for reappointment.

Doerfer's designation as chairman is a presidential prerogative under the Federal Communications Act and does not require confirmation by the Senate. President Eisenhower's nominee to the vacancy created on the FCC by the departure of Chairman McConnaughey — Frederick W. Ford, Justice Department attorney— is noted elsewhere in this issue. (See page 103.)

There was considerable surprise over President Eisenhower's "dark horse" selection for the TVA vacancy—Arnold R. Jones. The 53-year-old Deputy Budget Director from Manhattan, Kansas, is unknown personally and to a large extent professionally and politically to Senators who will query him on his qualifications and policy views. Since joining the government as Deputy Budget Director only fourteen months ago, he has appeared infrequently before legislative committees and has never really tangled with members of Congress.

Friends credit him with an engaging personal charm. They also likened his working habits and modern Republicanism to Milton Eisenhower with whom he was closely associated at Kansas State College.

Gas Bill Progress

Supporters of the Harris-O'Hara Bill to ease FPC controls over natural gas producers have been encouraged by a tentative committee vote on a key provision of the measure. The House Interstate Commerce Committee, still in the process of working out a final version of the bill for presentation to the House, defeated, 16 to 9, a proposed amendment which would have left almost intact the FPC's present authority to regulate gas producer rates.

Although eight members of the committee were absent when the vote was taken, some critics of the Harris-O'Hara Bill conceded the result indicated that opponents of the measure may have overestimated their strength. The committee vote, coupled with indications that President Eisenhower would not insist on two controversial amendments initially suggested by the administration, would seem to indicate that the bill has a fair chance of House passage at this session. A close vote was predicted by both sides, however, and there is virtually no hope of Senate action before adjournment.

Telephone and Telegraph

CWA Convention

TELEPHONE industry matters took a back seat at the recent annual convention of the CIO-AFL Communications Workers of America in Kansas City, Missouri. Resolutions adopted at the convention covered the whole range of social and economic affairs, both national and international, with particular emphasis on government power policies and natural resource development.

With respect to labor problems affecting the communications industry, the convention recommended raising the minimum hourly wages from $1 to $1.25; extension of the Fair Labor Standards Act to cover all communications workers, including those in telephone exchanges of 750 stations or less, was also proposed. The 2,500 delegates also approved the creation of a new bargaining policy committee, to be composed of sixty members. The new committee was created to remove collective bargaining matters from the floor of the convention and to place in the hands of a smaller group the details of bargaining policy. The delegates approved the creation of a district for the states of Pennsylvania and Delaware, conditioned on the acceptance of CWA membership by the Federation of Telephone Workers of Pennsylvania (FTWP). This independent union is now considering the question of joining CWA. If the new district is created, it would have an immediate membership of 15,000 communications workers with a potential of organizable workers in the area of approximately 40,000. The FTWP now represents 13,000 workers of the Pennsylvania Bell Telephone Company in the plant and accounting departments.

RESOLUTIONS concerning natural resource development generally followed the AFL-CIO philosophy of government-sponsored projects in this field. One resolution recommended federal construction of Hell's Canyon dam on the Snake river in Idaho; another denounced the policy of awarding rapid tax amortization certificates to privately owned utilities; a third resolution criticized specific utilities for accepting certificates awarded by the Office of Defense Mobilization. Comprehensive river basin development through federal action was recommended in another resolution, including expansion of the Tennessee Valley Authority, and developments on the Niagara and Potomac rivers.

On atomic energy development, another resolution described private industry's record in this field as "one of postponement and delay." Current practices and policies

of the Atomic Energy Commission, said the resolution, "are leading to the domination and monopolization of the atomic energy program by the private power companies." The resolution supported legislation leading to the construction and continued operation of several federally owned and operated atomically fueled generating stations.

The delegates re-elected Joseph A. Beirne as president of the union, defeating a bid by former Vice President A. T. Jones to unseat Beirne. Jones was then defeated in his vice presidential race by James E. Massey of Atlanta.

New FCC Appointment

PRESIDENT Eisenhower on July 2nd nominated a former Federal Communications Commission official, Frederick W. Ford, to be a member of the FCC for a seven-year term. Ford now is assistant to Deputy Attorney General William P. Rogers in the Justice Department. He was an attorney-adviser to the FCC from 1947 to 1951, and from 1951 to 1953 was chief of the hearing division of the FCC's broadcast bureau. He is a Republican from Clarksburg, West Virginia.

He would fill the vacancy on the commission left by the departure of George C. McConnaughey, whose term expired on June 30th.

Ohio Strike Ruling Attacked

THE National Labor Relations Board has been asked to reverse findings of a trial examiner in charges growing out of the recent telephone strike in Portsmouth, Ohio. The strike was marked by numerous acts of violence and property destruction, including cable cuttings and personal assaults. NLRB Trial Examiner Whittemore found the company primarily responsible for most of the violence and exonerated the union.

In a long brief, NLRB's general counsel asked the board to set aside Whittemore's report on grounds that the trial examiner was biased, that his report was based on erroneous conclusions of law, on erroneous credibility findings and findings of fact, and on an erroneous application of the "clean hands" doctrine, based on false findings of fact as to the conduct of the company.

"Throughout the intermediate report," said the general counsel's brief, "the trial examiner has distorted evidence and ignored evidence in making findings of facts adverse to the general counsel. The trial examiner's adverse credibility findings are without exception based on misstatements of testimony, failure to consider testimony, and on false findings of fact, or on irrelevant factors which are reflected in the injudicious statements appearing throughout the intermediate report."

The general counsel, in requesting the board to make a *de novo* review of the case, said the record contains a preponderance of substantial evidence to support findings by the board that the union engaged in unfair labor practices, as originally alleged.

FCC Opposes Antitrust Suit Dismissal

THE Federal Communications Commission has taken the position that its approval of a particular transaction in no way immunizes the transaction from later attack on grounds that it violates the antitrust laws. The commission made known its views in an appearance before a U. S. district court in Philadelphia to oppose dismissal of a suit against Radio Corporation of America and the National Broad-

casting Company, brought by the Justice Department's antitrust division.

The suit arises out of acquisition by NBC of Philadelphia radio and TV stations from the Westinghouse Broadcasting Company in early 1956. Westinghouse exchanged stations in Cleveland and $3 million. The Justice Department claims that the trade is part of an illegal attempt to restrain trade, which reduced Westinghouse's ability to compete with NBC for the sale of advertising and prevented competition in the Philadelphia area between advertisers and TV station owners.

RCA and NBC moved to dismiss the suit on the ground that the exchange had been approved by the FCC and that the Justice Department had ample opportunity to oppose the arrangement before it was concluded. Appearing as a friend of the court, the FCC said its approval was not intended to mean that the transaction was exempted from attack as a violation of the Sherman Act. The commission stated that it had no legal authority to grant exemptions in cases which might involve the Sherman Act or other antitrust laws and that it does not grant such exemptions. The FCC expressed the opinion that the Justice Department is not barred from filing an antitrust suit just because it did not take part in the proceedings before the commission.

Closed Circuit Toll TV

PAY-AS-YOU-SEE television promoters may find a way to introduce their product to the public, regardless of whether the Federal Communications Commission decides to give the controversial proposal a trial run. The Metropolitan Life Insurance Company is reported to be considering the possibility of running closed circuit TV wires into the many large apartment projects operated by the company.

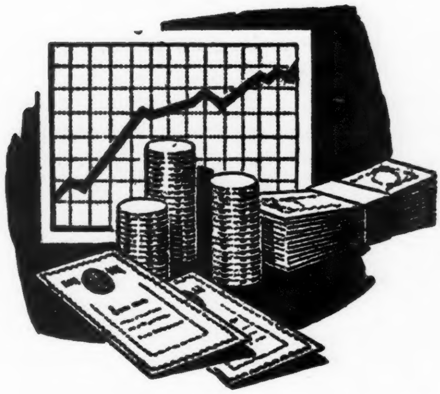
The TV programs would be carried into Metropolitan's apartments by means of cable, instead of broadcasts through the air. Originally, proponents of toll television planned broadcasting programs much in the manner of regular TV, but only for paying viewers. The programs would be broadcast in "scrambled" form and viewers would have to unscramble them by dropping coins in a box or in some other way activate a decoder to get a complete image on the TV screen. Such broadcasts would need FCC approval, which so far has not even authorized large-scale toll TV tests.

Even though the FCC has announced that it will soon lay down ground rules for tests in the near future, at least three companies with pay TV systems are going ahead with closed circuit projects. Apart from size, plans for toll TV in Metropolitan Life's apartments are typical of other closed circuit proposals. Live programs would be picked up by TV cameras and relayed to stations in apartment house basements; filmed shows would originate in the basement station, with a camera focusing on a picture thrown onto a screen by a projector. From the stations, programs would be piped to TV sets in individual living rooms. Residents could pick programs they wanted to watch, paying for the shows by dropping coins into an attachment on the TV set.

If Metropolitan Life decides to install basement transmission stations and decoding devices, which would cost an estimated $50 for each TV set, the total outlay for all its projects might reach as high as $2 million. The company's return on the outlay probably would come through some split of viewers' fees with the program promoter, or from leasing the coin TV concession to someone else.

Financial News and Comment

By OWEN ELY



Utility Stocks Decline Sharply Due to High Money Rates and Adverse Rate Decisions

WHILE money rates and the cost of senior financing for utilities had been steadily rising, utility stocks ignored money rates until recently, the Dow-Jones utility average advancing from 68.33 early this year to 74.61 on May 21st, a gain of over 9 per cent. However, the offering of three new first mortgage bond issues of utility companies to yield 6 per cent or over brought the matter of money rates forcefully to the market's attention, and utility stocks "fell out of bed."

While the growth utility stocks usually ignore money rates and yields because they are bought for capital gains, these stocks were also unsettled by unfavorable rate decisions. On May 8th a Federal Power Commission examiner recommended that Colorado Interstate Gas Company be required to refund about $33 million to customers in connection with two rate increases which had been collected under bond since 1954-55. President Mueller stated that if these recommendations were adopted by the commission and sustained by the courts, it would mean bankrupting the company. He also stated that the proposed rate schedule on the basis of 1956 volume would have produced only half the money necessary to pay bond interest, with nothing available for preferred or common dividends. This naturally resulted in a substantial decline in the company's stock.

ON June 16th another blow fell. While the Florida utilities had been blessed with a co-operative state commission, the continued uptrend of earnings and market prices perhaps came to the attention of the commission. In any event, the commission ordered Florida Power & Light Company and Gulf Power Company (subsidiary of Southern Company) to reduce rates July 15th. Florida P&L's gross earnings were said to exceed a reasonable amount by about $4 million per annum and

DEPARTMENT INDEX

Gulf Power's by about $600,000. While no definite amounts were specified, the commission held that rates should be reduced so as to bring earnings of the two companies down to a 6.5 per cent return on the fair value of plant and equipment. Later Florida Power & Light decided to accept the reduction without making a prolonged fight.

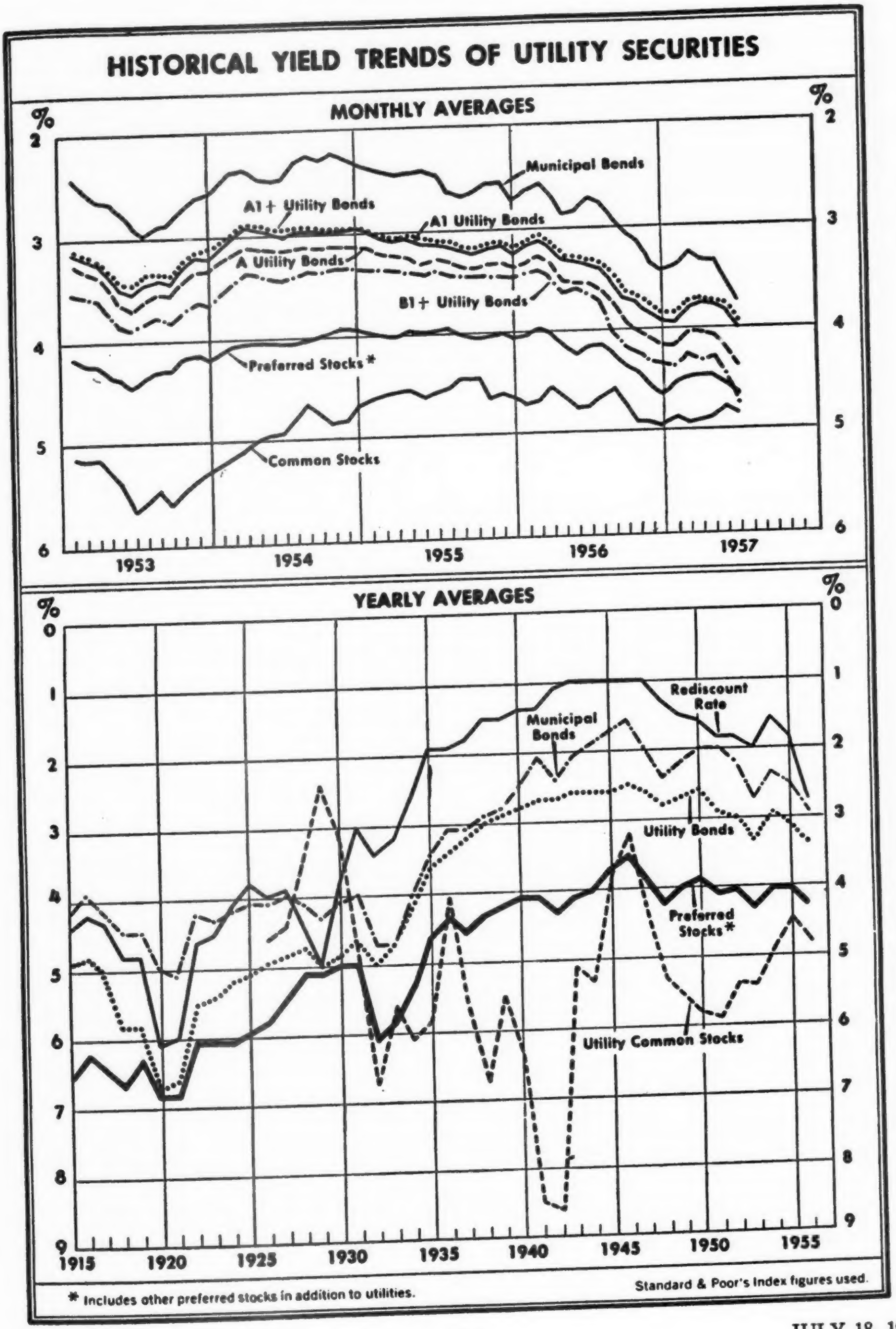
Assuming that the reductions would approximate the amounts said to be excessive, the rate cut for Florida P&L would approximate 32 cents a share after taxes, and Southern Company would be affected by only one or two pennies per share. Florida Power & Light's earnings over the past year and a half (on a twelve months' ended basis) have been increasing at the rate of 4-5 cents a month, so that in theory the rate cut would only cancel about seven months' growth. However, the stock of Florida Power & Light promptly dropped about ten points and Florida Power Corporation followed suit with a decline almost as large, despite the fact that the commission's executive secretary denied any present plans to reduce that company's rates. He did state, however, that the commission is preparing to take a closer look at rates of all utilities and has hired two roving auditors to "drop in" on utilities from time to time and check their books, instead of relying on annual reports. (See, also, page 127.)

THIS immediately raised the question as to whether growth utilities in other states such as Texas might also be vulnerable. While the Texas state law mentions 8 per cent (not 6 per cent) as an adequate return, there is no state commission and municipalities in the past have generally been liberal, appreciating that the utilities could not keep up with the rapid growth of the state if hamstrung by rate litigation. Nevertheless, the question is now raised in some quarters whether the municipalities might do something which would involve rate cuts in that state. As the combined result of all these factors utility stocks in the five weeks' period ended June 26th lost the entire advance of March 25th-May 21st, although the Dow utility average avoided going into new low ground for 1957.

The stock of Florida Power & Light has been one of the most popular growth stocks. Back in 1949-51 when the stock was slowly "seasoning" following its distribution to holders of American Power & Light, it sold at only about 8-10 times earnings. In 1952 the company began to receive attention as a growth company and the P-E multiple began to lengthen. By 1955 the stock was selling at multiples of about 15-20 times earnings and at the recent high close to 60 it sold at over 22 times the earnings of $2.70 for the twelve months ended March 31st. To some extent the multiple could be explained by the company's conservative bookkeeping methods as compared with most other growth companies. Nevertheless, while share earnings had increased only about 150 per cent since 1949 the price (after adjustment for the split in 1955) had advanced some 525 per cent at its recent high.

MCGREGOR SMITH, chairman of Florida Power & Light, has stated that earnings of $2.81 for the twelve months ended May 31st amounted to a return of 7.2 per cent on the company's investment of approximately $331 million. However, if the company had been able to build the necessary reserve capacity to keep pace with the increase in power sales the company's return would have been only 6.6 per cent. He said that the company is short about $30 million worth of reserve generating capability.

The company hopes to reduce its gen-


HISTORICAL YIELD TRENDS OF UTILITY SECURITIES
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5
6
Municipal Bonds
A1+ Utility Bonds
A1 Utility Bonds
A Utility Bonds
B1+ Utility Bonds
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1953
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Rediscount Rate
Municipal Bonds
Utility Bonds
Preferred Stocks*
Utility Common Stocks
1915
1920
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1930
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1940
1945
1950
1955
* Includes other preferred stocks in addition to utilities.
Standard & Poor's Index figures used.

erating costs, although it is understood that consumers will obtain most of the benefits from fuel economies due to fuel adjustment clauses. Heretofore the company had been using fuel oil but the company has now contracted to use 180 million cubic feet of natural gas daily when the Houston-Texas Gas & Oil Corporation completes a pipeline to transport gas to Florida, possibly within a year. This is expected to reduce generating costs about $300,000-$400,000 a year after amortizing the cost of converting some boilers to the new fuel, and additional savings may be realized from gas obtained on an interruptible basis. The company is also investigating the possibility of burning coal, in view of recent fuel oil price increases.

The company remains optimistic on continued rapid growth prospects. President Fite has pointed out that due to the increased summer demand only about 10 per cent of capacity is idle at the summer peak compared with 30 per cent a decade ago. Summer sales have increased more rapidly than winter because of the swift growth of the summer tourist industry, the additional use of air conditioning, and increased industrial demand for power. The company expects to spend about $375 million on new construction over the next five years—as compared with net plant of a little over $300 million at the end of 1956.

Inquiring Stockholders—Bane Of the Utility Executive

ANYONE who attends one of the stockholders' meetings of the larger utility companies for the first time may be somewhat depressed by the level of investor information indicated by many of the questions asked, as well as the suspicious attitude of some stockholders that the management will put something over on them unless they are alert enough to detect it. There is also the "professional" type of stockholder who essays the patronizing rôle of economist or elder statesman in offering suggestions to the management or criticizing some of its policies.

The latitude allowed stockholders at these meetings and the patience of the management in dealing with all sorts of picayune problems indicate that these town meeting sessions are a fine example of American democracy as applied to the "People's Capitalism." The official who answers such questions understandingly sometimes finds his audience surprisingly appreciative, as in a recent instance where a stockholder proposed that the president of the company might well emulate the late Wendell Willkie and seek the nomination for president of the U. S. in 1960.

Some utility executives—apparently gluttons for self-discipline—now hold regional meetings in addition to the formal annual meeting, to keep closely in touch with stockholders. Even though the chairman or president must sometimes withstand a barrage of irrelevant questions and comments, this is part of the price that must be paid for building up and maintaining good relations with the stockholder group as a whole. While proxy fights are rare among utility companies these days, no top executive would wish to permit criticisms of his administration, or misunderstandings about policy matters, to come to a head and threaten a proxy fight.

ALMOST all the larger utility companies have adopted the policy of quarterly newsletters to stockholders in addition to readable annual reports, proxy letters, and occasional special bulletins. A number of them print the proceedings at the annual meetings so that stockholders unable to attend can have a digest. At the recent an-

nual meeting of Commonwealth Edison Company, Chairman Willis Gale pointed out that the company was doing its best to keep stockholders fully informed through its quarterly bulletins, annual report, and special letters, and stated "we appear to have improved our stockholder relations. . . . we have had fewer inquiries and fewer letters of critical comment."

However, he admitted that they still receive a very few highly critical letters which seem based on the assumption that the management and the directors "have no sincere interest in the welfare of the stockholders." When these letters are signed (not all of them are) they are answered as fully and sincerely as possible. The matter of officers' salaries, as disclosed in the proxy statement, seems to interest stockholders the most, Mr. Gale stated; of the seven comments received this year "one of them was pretty rough, to the effect that our only interest is higher and higher salaries."

In replying to such letters, he said, "I have pointed out before how important it is for us to build and retain the strongest possible management team. To do this, our salaries must be comparable with those paid by similar companies. Peoples

JUNE UTILITY FINANCING

PRINCIPAL PUBLIC OFFERINGS OF ELECTRIC AND GAS UTILITY SECURITIES

Date	Amount (Mill.)	Description	Price To Public	Under-writing Spread	Offer-ing Yield	Aver. Yield For Securities of Similar Quality	Moody Rating	Success Of Offer-ing
		Bonds and Debentures						
6/5	$25.0	Boston Edison 1st 4⅝s 1987	101.55	.78C	4.53%	3.85%	Aaa	d
6/5	10.0	North. States Power 1st 4⅝s 1987* ..	100.00	.90C	4.63	3.91	Aa	d
6/7	15.5	Georgia Power 1st 5¼s 1987	102.20	.72C	5.10	4.04	A	b
6/10	20.0	Columbia Gas System Deb. 5½s 1982*	101.36	1.04C	5.40	4.04	A	a
6/11	19.0	Metropol. Edison 1st 4⅞s 1987	101.50	.93C	4.78	3.92	Aa	d
6/12	25.0	Consol. Nat. Gas Deb. 4⅞s 1982*	100.16	.93C	4.80	3.90	Aaa	a
6/13	30.0	Mich. Wisc. Pipeline 1st 6¼s 1977* ..	102.89	2.18C	6.00	4.32	Baa	b
6/18	30.0	Mich. Cons. Gas 1st 6¼s 1982*	103.22	1.91C	6.00	4.14	A	a
6/19	15.0	Texas East. Trans. Deb. 6s 1977* ..	98.50	1.75N	6.13	—	Ba	b
6/20	10.0	Mont.-Dak. Uts. Conv. Deb. 4⅞s 1977*	101.00	1.83C	4.80	—	Ba	a
6/25	15.0	Delaware P. & L. 1st 5s 1987	101.38	1.19C	4.91	3.95	Aa	a
6/26	20.0	Puget Sound P. & L. 1st 6¼s 1987 ..	103.46	1.90C	6.00	4.34	Baa	a
6/28	35.0	So. Calif. Gas 1st 5⅛s 1983*	101.81	1.15C	5.00	3.95	Aa	a
		Preferred Stocks						
6/19	20.0	Texas East. Trans. 5.75% Sub. Conv.	100.00	3.00N	5.75	5.05	—	a
							Earns.-Price Ratio	*Notes On Issue*
		Common Stock—Offered to Stockholders						
6/5	0.8	Bridgeport Gas	26.00	N	6.15		10.10	h
6/5	22.1	Philadelphia Electric	36.25	N	5.52		7.30	i
6/10	3.7	Portland Gas & Coke	16.25	N	3.69		7.46	k
		Common Stock—Offered to Public						
6/5	25.0	Virginia Elec. & Power	25.00	.79C	4.00		5.75	d
6/19	7.9	Gulf States Utilities	39.25	1.37C	4.08		5.75	d
6/27	9.0	Duquesne Light	34.00	1.49C	5.88		7.19	m

N—Negotiated. C—Competitive. *Sinking fund. a—Reported that the issue was well received. b—Reported that the issue was fairly well received. d—Reported that the issue sold slowly. h—Offered to stockholders on a 1-for-7 basis. i—Offered to stockholders on a 1-for-20 basis; 89 per cent subscribed. k—Offered on a 1-for-5 basis with oversubscription, etc. m—Not company financing.

Source, Irving Trust Company.

Gas Light & Coke Company is losing its chairman, Mr. James Oates, Jr., to the Equitable Life Assurance Society of New York. . . . this case is a definite illustration of the fact that there is competition for executive talent at all levels."

At the annual meeting of another large utility company, stockholders were quite interested to learn that the company had issued options to some of the officers, but the president was able to disarm any suspicion by explaining the character of the options and their value as a supplementary form of compensation. (Presumably options were a consideration in his own decision to accept his present post, resigning the presidency of another utility company.) He mentioned that all his security investments are entirely in the company, which pleased stockholders.

Getting back to the Commonwealth Edison meeting, Mr. Gale mentioned an anonymous stockholder who in the past had written each year "accusing us of stealing the difference between our per share earnings and our dividend." They did not hear from this man in 1957 but a more friendly stockholder (also anonymous) wrote in to inquire why the dividend was only $2 when $2.62 was earned. Mr. Gale told the meeting:

> I am sure that the great majority of stockholders are aware of the fact that it is not customary for companies to pay out all of their earnings in dividends. In most years, it is a practice to retain something for the "rainy day" and apply the money thus made available toward the cost of the company's expansion program. This tends over the years to build up the stockholders' equity and should result in the long run in a gradual increase in the earning power of the company's stock.
>
> Utility companies as a rule pay out a higher percentage of earnings than industrial companies. I think the reason for this is that the earnings of utility companies fluctuate less than those of industrial companies. Also, it is a practice of utilities to finance a higher percentage of their expansion programs through the sale of new securities. Industrial companies, on the other hand, tend to finance a greater share of their expansion through retained earnings.
>
> It is a fair statement, I believe, that a typical industrial company pays out about one-half of its earnings in dividends. The typical utility company pays out about three-quarters. Our pay-out has been about three-quarters in recent years. In other words, we have conformed rather closely to the general utility pattern.

Mr. Gale said that from time to time stockholders had indicated some concern over the company's huge expansion program. During 1946-56, the company spent over a billion dollars for electrical facilities, and expenditures for the four years 1957 through 1960 are budgeted at $650 million. He remarked:

> We believe basically that we are fortunate to serve such a dynamic area and that, in the long run, our expansion program will prove to have been in the best interests of our stockholders.
>
> Incidentally, I should like to point out that, in my opinion, few people realize the tremendous contribution which Commonwealth Edison has made to the postwar growth and development of the Chicago area. Perhaps this contribution would be better understood if I used just one example. One of the 1,200 new or branch plants built in Chicago and northern Illinois in the postwar period is the large stamping plant completed last year in Chicago Heights by the

Ford Motor Company. It now employs 4,000 people. Its power demand is nearly 12,000 kilowatts. In order to serve this 12,000-kilowatt load, we must make available something on the order of $5 million of generating, transmission, distribution, and other facilities. This estimate is based on our average investment of $419 per kilowatt of system load. It does not include additional facilities required because of the residential and commercial expansion which results from a new 12,000-kilowatt industrial load. . . .

NYSE Listing Saves Fees

A SURVEY by the New York Stock Exchange indicates that in 1956 companies listed on the Big Board paid less in commissions and fees to finance new stock issues than companies whose stocks were unlisted. The survey was based on an analysis of financing by 53 Stock Exchange companies and 51 not listed on the exchange. The companies with listed stocks paid $2.60 in underwriting fees per $100 of new capital as compared with $5.97 for the nonlisted companies. Forty-five firms or 85 per cent of the listed companies paid underwriters less than 4 per cent of the amount received for new issues, whereas only 11 of the nonlisted companies (22 per cent) enjoyed costs that low.

In making its survey the Stock Exchange studied the data carefully so as to eliminate factors that might distort the final results. Thus comparisons were made between the two types of companies in connection with the seasonal timing of offering, size of the company, type of industry, value of issue, rating, value of stock rights, and distribution of share owners.

DATA ON ELECTRIC UTILITY STOCKS

Annual Rev. (Mill.)			*6/26/57 Price About*	*Dividend Rate*	*Approx. Yield*	*Recent Share Earnings*	*% Increase*	*Aver. Incr. In Sh. Earns. 1951-56*	*Price-Earn. Ratio*	*Div. Pay-out*	*Approx. Common Stock Equity*
$268	S	American G. & E.	36	$1.44m	4.0%	$2.06Ma	3%	9%	17.5	70%	34%
46	O	Arizona Pub. Ser.	25	1.12	4.5	1.78Ma	25	13	14.0	63	31
11	O	Arkansas Mo. Power	16	1.00c	6.3	1.00Ma	6	10	16.0	100	31
32	S	Atlantic City Elec.	29	1.30	4.5	1.67My	10	10	17.4	78	33
132	S	Baltimore G. & E.	34	1.80	5.3	2.45Ma	10	8	13.9	73	45
7	O	Bangor Hydro-Elec.	31	1.90	6.1	2.69De	22	8	11.5	71	35
5	O	Black Hills P. & L.	23	1.40	6.1	2.25Ap	1	1	10.2	62	27
99	S	Boston Edison	48	2.80	5.8	3.45De	1	2	13.9	81	50
21	A	Calif. Elec. Power	14	.76	5.4	.98Ma	5	16	14.3	78	36
21	O	Calif. Oreg. Power	31	1.60	5.2	2.30De	9	5	13.5	70	33
8	O	Calif. Pac. Util.	29	1.50	5.2	2.34Ma	5	6	12.4	64	25
63	S	Carolina P. & L.	23	1.20	5.2	1.71My	—	2	13.5	70	42
28	S	Cent. Hudson G. & E.	16	.80	5.0	1.08Ma	4	10	14.8	74	34
21	O	Cent. Ill. E. & G.	30	1.60	5.3	2.36Ma	7	11	12.7	68	33
35	S	Cent. Ill. Light	50	2.60	5.2	3.87My	—	8	12.9	67	42
51	S	Cent. Ill. P. S.	28	1.60	5.7	2.33My	D4	12	12.0	69	38
13	O	Cent. Louisiana Elec.	36	1.60	4.4	1.94Ma	2	8	18.5	82	32
35	O	Cent. Maine Power	21	1.40	6.7	1.76My	6	4	11.9	80	34
128	S	Cent. & South West	39	1.60	4.1	2.22Ma	5	15	17.6	72	35
12	O	Cent. Vermont P. S.	17	1.00	5.9	1.20Ap	1	1	14.2	83	31
114	S	Cincinnati G. & E.	26	1.20f	4.6	2.00Ma	—	7	13.0	60	43
7	O	Citizens Util. "B"	16	.90a	5.6a	1.15Ma	7	10	13.9	78	42
111	S	Cleve. Elec. Illum.	38	1.60	4.2	2.55Ma	D4	8	14.9	63	49
4	O	Colo. Cent. Power	27	1.20	4.4	1.82Ma	14	8	14.8	66	33
48	S	Columbus & S. O. E.	28	1.60	5.7	2.30Ma	4	5	12.2	70	36
360	S	Commonwealth Ed.	38	2.00	5.3	2.78Ma	4	8	13.7	72	47
11	A	Community Pub. Serv.	24	1.20	5.0	1.87Ma	10	15	12.8	64	52

Annual Rev. (Mill.)		(Continued)	6/26/57 Price About	Dividend Rate	Approx. Yield	Recent Share Earnings	% Increase	Aver. Incr. In Sh. Earns. 1951-56	Price-Earn. Ratio	Div. Payout	Approx. Common Stock Equity
2	O	Concord Elec.	44	2.40	5.5	2.67De	D1	1	16.5	90	64
71	O	Conn. Lt. & Pr.	17	1.00	5.9	1.12My	D7	7	15.2	88	39
23	O	Connecticut Power	40	2.25	5.6	2.84Ma	D2	4	14.1	79	41
522	S	Consol. Edison	42	2.40	5.7	3.15Ma	D2	8	13.3	76	39
208	S	Consumers Power	46	2.40	5.2	3.16Ap	D4	6	14.6	76	43
74	S	Dayton P. & L.	46	2.40	5.2	3.27Ma	D7	8	14.1	73	38
39	S	Delaware P. & L.	44	1.80	4.1	2.64Ma	9	10	16.7	68	35
237	S	Detroit Edison	39	2.00	5.1	2.50My	11	8	15.6	80	46
130	A	Duke Power	29	1.20	4.1	1.90De	5	20	15.3	63	52
95	S	Duquesne Light	34	2.00	5.9	2.42Ma	D1	4	14.0	83	34
31	O	East. Util. Assoc.	32	2.20	6.9	2.52Ma	D5	0	12.7	87	34
2	O	Edison Sault Elec.	16	.80	5.0	1.09Ma	D10	13	14.7	73	42
12	O	El Paso Elec.	22	1.00	4.5	1.42Ap	14	8	15.5	70	41
12	S	Empire Dist. Elec.	19	1.20	6.3	1.63Ma	10	3	11.7	74	31
5	O	Fitchburg G. & E.	49	3.00	6.1	3.65De	4	3	13.4	82	45
49	S	Florida Power Corp.	51	1.80	3.5	2.93Ma	26	19	17.4	61	32
110	S	Florida P. & L.	49	1.28	2.6	2.70Ma	24	25	18.1	47	38
189	S	General Pub. Util.	36	2.00	5.6	2.93Ma	2	12	12.3	68	40
6	O	Green Mt. Power	15	1.00	6.7	1.22Ma	D1	7	12.3	82	36
56	S	Gulf States Util.	36	1.60	4.4	2.28My	5	14	15.8	70	32
22	A	Hartford E. L.	54	2.88	5.3	4.08Ma	D5	12	13.2	71	49
5	O	Haverhill Elec.	40	2.35	5.9	2.67De	2	—	15.0	88	100
21	O	Hawaiian Elec.	45	2.50g	5.4	3.32Ma	6	—	13.5	77	36
78	S	Houston L. & P.	55	1.60k	2.9	2.58My	D3	20	21.3	62	46
8	O	Housatonic P. S.	21	1.40	6.7	1.43De	1	0	14.7	98	53
27	S	Idaho Power	35	1.40	4.0	2.19Ma	12	7	16.0	64	36
82	S	Illinois Power	29	1.50	5.2	1.90Ap	3	6	15.3	80	35
43	S	Indianapolis P. & L.	30	1.50	5.0	2.09Ma	7	5	14.4	72	39
20	S	Interstate Power	13	.80	6.2	1.04Ma	—	3	12.5	77	30
33	O	Iowa Elec. L. & P.	28	1.50	5.4	1.96My	D13	10	14.3	77	31
39	S	Iowa-Ill. G. & E.	30	1.80	6.0	2.42Ma	1	3	12.4	75	41
37	S	Iowa Power & Lt.	27	1.60	5.9	2.04Ma	D6	2	13.2	78	35
32	O	Iowa Pub. Serv.	15	.80	5.3	1.08Ap	D4	5	13.9	74	35
13	O	Iowa Southern Util.	20	1.28	6.4	1.69Ap	D1	8	11.8	76	37
56	S	Kansas City P. & L.	37	2.00	5.4	2.79Ap	3	8	13.3	72	35
30	S	Kansas G. & E.	27	1.32	4.9	2.28My	19	12	11.9	58	29
45	S	Kansas Pr. & Lt.	25	1.30	5.2	2.03Ma	7	9	12.3	64	31
37	O	Kentucky Util.	25	1.28	5.1	2.05Ma	1	9	12.2	62	34
7	O	Lake Superior D. P.	23	1.20	5.2	1.65Ma	2	6	13.9	73	38
6	O	Lawrence Elec.	26	1.75	6.7	1.46De	D22	D	17.8	83	63
98	S	Long Island Ltg.	22	1.20	5.5	1.45Ma	D5	6	15.2	83	32
52	S	Louisville G. & E.	27	1.10	4.1	1.88De	4	4	14.4	59	40
8	O	Lowell Elec. Lt.	53	3.00	5.7	3.37De	D8	D	15.7	89	58
9	O	Lynn G. & E.	32	1.60	5.0	2.10De	3	8	15.2	76	77
9	O	Madison G. & E.	42	1.80	4.3	4.08Ma	NC	11	10.3	44	50
4	A	Maine Pub. Serv.	16	1.08	6.8	1.35Ap	31	3	11.9	80	33
5	O	Michigan G. & E.	46	1.60b	6.5b	4.05Ma	7	14	11.4	40	37
159	S	Middle South Util.	34	1.60	4.7	2.25Ma	15	4	15.1	71	34
28	S	Minnesota P. & L.	26	1.40	5.4	2.18My	D1	6	11.9	64	36
2	O	Miss. Valley P. S.	28	1.40	5.0	2.14Ma	D14	3	13.1	65	31
12	A	Missouri Pub. Serv.	13	.72h	5.5	.94Ap	—	20	13.8	77	33
6	O	Missouri Util.	22	1.36	6.2	1.80Ma	D1	2	12.2	76	32
39	S	Montana Power	45	2.00	4.4	3.59Ma	6	6	12.6	56	37
142	S	New England Elec.	16	1.00	6.3	1.27Ma	—	0	12.6	79	34
44	O	New England G. & E.	17	1.05	6.2	1.41Ma	—	5	12.1	74	42
45	O	New Orleans P. S.	45	2.25	5.0	2.63Ma	2	0	17.1	86	38
2	O	Newport Elec.	18	1.00	5.6	1.40Ja	16	4	12.9	71	30
83	S	N. Y. State E. & G.	35	2.00	5.7	3.02My	—	8	11.6	66	39
244	S	Niagara Mohawk Pr.	29	1.80	6.2	2.07Ma	D8	4	14.0	87	33
81	O	Northern Ind. P. S.	39	1.92	4.9	2.92Ma	4	7	13.4	66	35
139	S	Nor. States Power	17	.90	5.3	1.20Ma	3	8	14.2	75	34
9	O	Northwestern P. S.	16	1.00	6.3	1.26Ma	D12	3	12.7	80	26
129	S	Ohio Edison	48	2.64	5.5	3.55My	D4	9	13.5	74	44
48	S	Oklahoma G. & E.	41	1.80	4.4	2.45Ma	11	9	16.7	73	35
15	O	Otter Tail Pr.	26	1.60	6.2	2.20Ma	—	7	11.8	73	38
471	S	Pacific G. & E.	47	2.40	5.1	3.36Ma	D1	13	14.0	71	35

Annual Rev. (Mill.)		(Continued)	6/26/57 Price About	Dividend Rate	Approx. Yield	Recent Share Earnings	% Increase	Aver. Incr. In Sh. Earns. 1951-56	Price-Earn. Ratio	Div. Pay-out	Approx. Common Stock Equity
48	O	Pacific P. & L.	31	1.60	5.2	2.10De	17	8	14.8	76	29
129	S	Penn Power & Lt.	41	2.40	5.9	3.31Ap	7	11	12.4	73	28
225	S	Phila. Elec.	37	2.00	5.4	2.65Ma	9	6	14.0	75	43
35	O	Portland Gen. Elec.	23	1.20	5.2	1.64My	D3	6	14.0	73	36
64	S	Potomac Elec. Pr.	20	1.10	5.5	1.58Ma	5	8	12.7	70	39
83	S	Pub. Serv. of Colo.	43	1.80i	4.2	2.68Ma	8	8	16.0	67	39
300	S	Pub. Serv. E. & G.	29	1.80	6.2	2.15Ma	D11	—	13.5	84	38
75	S	Pub. Serv. of Ind.	36	2.00	5.6	2.60My	6	4	13.8	77	36
29	O	Pub. Serv. of N. H.	17	1.00	5.9	1.41My	11	13	12.1	71	32
12	O	Pub. Serv. of N. M.	16	.80	5.0	1.18Ma	15	7	13.6	68	37
25	S	Puget Sound P. & L.	27	1.36	5.0	1.74My	10	10	15.5	78	61
58	S	Rochester G. & E.	27	1.60	5.9	2.24Ma	5	10	12.1	71	35
19	O	Rockland L. & P.	19	.80	4.2	1.05De	9	11	18.1	76	30
8	S	St. Joseph L. & P.	24	1.40	5.8	1.92Ma	12	7	12.5	73	40
51	S	San Diego G. & E.	20	.96	4.8	1.46Ma	6	6	13.7	66	40
8	O	Savannah E. P.	19	1.00	5.3	1.36Ma	12	4	14.0	74	30
9	O	Sierra Pacific Pr.	22	1.20	5.5	1.94Ap	21	14	11.3	61	27
195	S	So. Calif. Edison	48	2.40	5.0	3.20Ma	D5	3	15.0	75	37
43	S	So. Carolina E. & G.	21	1.10	5.2	1.37Ma	NC	20	15.3	80	36
7	O	Southern Colo. Pr.	15	.70	4.7	1.29De	3	9	11.6	54	43
228	S	Southern Co.	24	1.10	4.6	1.48Ap	4	10	16.2	74	35
16	S	So. Indiana G. & E.	29	1.60	5.5	2.06Ma	6	5	14.1	78	35
7	O	So. Nevada Power	19	1.00	5.3	1.58Ma	15	15	12.0	63	34
1	O	Southern Utah Power	17	1.00	5.9	1.55Ap	51	1	11.0	65	39
3	O	Southwestern E. S.	20	1.16	5.8	1.64My	D1	4	12.2	71	27
39	S	Southwestern P. S.	30	1.40	4.7	1.71Ap	17	4	17.5	73	30
26	S	Tampa Elec.	33	1.20	3.6	1.67My	11	14	19.8	72	36
146	S	Texas Utilities	43	1.44	3.3	2.43Ap	18	15	17.7	59	38
40	S	Toledo Edison	13½	.70	5.2	1.02Ma	D6	5	13.2	69	29
14	O	Tucson G. E. L. & P.	34	1.40	4.1	2.11Ma	34	14	16.1	66	35
122	S	Union Elec. of Mo.	27	1.52	5.6	1.70De	—	11	15.9	89	36
33	O	United Illuminating	23	1.30	5.7	1.61De	—	7	14.3	81	48
5	O	Upper Peninsula Pr.	27	1.60	5.9	2.00Ma	D8	10	13.5	80	37
41	S	Utah Power & Lt.	27	1.20	4.4	1.74Ap	4	9	15.5	69	43
118	S	Virginia E. & P.	23	1.00	4.3	1.44Ma	9	14	16.0	69	34
26	S	Wash. Water Power	35	1.88	5.4	2.37My	8	14	14.8	79	41
132	S	West Penn Elec.	27	1.50	5.6	2.07Ma	D1	9	13.0	72	33
64	O	West Penn Power	48	2.40	5.0	3.12Ma	D5	13	15.4	77	33
11	O	Western Lt. & Tel.	33	2.00	6.1	2.98Ma	5	10	11.1	67	33
26	O	Western Mass Cos.	38	2.20	5.8	3.13My	D3	10	12.1	70	56
105	S	Wisc. El. Pr. (Cons.)	30	1.60	5.3	2.41Ma	D1	5	12.4	67	40
40	O	Wisconsin P. & L.	25	1.28	5.1	1.94Ma	11	4	12.9	66	36
37	S	Wisconsin P. S.	22	1.20	5.5	1.83Ma	4	6	12.0	66	36
		Averages			5.3%			9%	14.1	72%	
		Foreign Companies									
203	S	Amer. & Foreign Pr.	16	$1.00	6.3%	$2.09De	—	2%	7.6	48%	47%
149	A	Brazilian Trac.	10½	.75n	7.1	2.19De	86	D	4.8	34	73
68	A	British Columbia Pr.	54	1.20	2.2	2.34De	14	27	23.1	51	27
17	A	Gatineau Power	31	1.40	4.5	2.28De	15	15	13.6	61	31
35	O	Mexican L. & P.	14½	—	—	1.67De	D2	62	8.7	—	46
13	A	Quebec Power	30	1.20	4.0	1.99De	15	14	15.1	60	52
54	A	Shawinigan Wtr. & Pr. ...	96	1.80	1.9	4.25De	22	26	22.6	42	40

A—American Stock Exchange. B—Boston Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. *Based on average number of shares. **Calendar year 1955. a—Estimated annual rate. The "A" stock received stock dividends. b—Also 3 per cent stock dividend December 31, 1956, which is included in the yield. c—Also 2 per cent stock dividend January 10, 1956. f—Also 5 per cent stock dividend August 15, 1956. g—Cash dividends of $2.50 in 1956 included 30 cents extra; 10 per cent stock dividend also paid April 30, 1956. h—Also stock dividend of one share for each 200 shares held September 12, 1956. i—Also 10 per cent stock dividend November 16, 1956. j—Also 10 per cent stock dividend August 31, 1956. k—Also 5 per cent stock dividend December 17, 1956. m—Also 2 per cent stock dividend January 10, 1956; 3-for-2 split June 15, 1956. n—Also 5 per cent stock dividend December 28, 1956.

What Others Think

Effect of Current Money Conditions on Utilities

THE impact of present large demands for new money has a particular significance for utilities since it has been estimated that currently around 60 per cent of the gas and electric industry requirements will have to be raised through the sale of new securities. "Due to the fact that utilities are strictly regulated as to how much they can earn, a much smaller portion of earnings can be retained in the business as compared with successful and fast-growing industrial concerns. Furthermore, the gas and electric industry requirements represent only about one-fifth of the total amount of new-money needs projected for 1957 by all industries and are indicative of the highly competitive situation facing the utilities in the money market."

With this introduction, Richard N. Benjamin, president of Stone & Webster Service Corporation, launched into a thoughtful analysis of the money situation facing utilities in a recent address before the Indiana Gas Association at French Lick, Indiana.

In order to evaluate the effect of heavy competition for funds in the current money market, Benjamin began by reviewing certain historical background data as a means of throwing light on the perspective for the future. Referring to charts prepared for this purpose, Benjamin noted that from 1900 up to approximately 1920, there was a long-term upward trend of yields on high-grade railroad bonds which carried them from just above a 3 per cent level to over 5 per cent. In 1920 high-grade utility bond yields were even higher at about 6½ per cent, having less investment recognition at that time. Following the 1920 peak, rates went into a prolonged decline which extended to 1946, interrupted temporarily in the late 1920's and early 1930's. "During the 1940's, particularly," said Benjamin, "we became used to a relatively low level of interest rates (2.60 per cent) and began to think of it as a normal situation. Since 1950 there has been a gradual upward trend with a moderate correction in 1952 and the rising yields which we experienced in 1956 appeared to be a continuation of this broad trend."

IN reviewing interest rates during this past year, Benjamin stressed particularly the pattern which took place in 1953. There had been a gradually rising pattern of yields since 1950 with some stabilization in 1952, but in the first quarter of 1953 it was apparent that a substantial change in monetary policy and in interest levels was in the making, he explained. Interest rates continued to rise until midsummer 1953, after which there was a

lowering of yields, followed by some leveling off. It was not until 1956 that interest rates began to show a sharp and rapidly rising level which was almost uninterrupted till late January, 1957. The March, 1953, rise ended in six months after increasing from a 3.20 per cent basis to 3.70 per cent for seasoned A bonds compared with an increase from a 3.30 per cent basis in March of 1956 to 4 per cent in February, 1957, a period of ten months. "We might conclude that the longer duration of the upward trend in yield was of more importance as an indication of the severity of the current upswing in money costs than the actual percentage increase," Benjamin commented. High-grade public utility preferreds also reached a high point in the middle of 1953 when the yield approximated 4½ per cent. This compares with a current yield of approximately the same.

Another yardstick which is fundamental in the money market picture, said Benjamin, is the Federal Reserve rediscount rate pattern and the prices at which three-month Treasury bills have been sold. The rediscount rate is the rate charged by the Federal Reserve to member banks when they borrow money from the Federal Reserve. Short-term Treasury bills are short-term obligations sold at frequent intervals to the public and in which there is an active market. Benjamin noted that the rediscount rate stayed between 1 and 2 per cent until 1953 when it leveled out at 2 per cent, dropped moderately during 1954, and has continued since that time on a rather sharp increase to 3 per cent. It is not surprising, therefore, he said, that three months' Treasury bills followed a similar pattern and are now quoted at approximately 3.03 per cent. The bank prime interest rate for loans of usually less than one year charged by commercial banks to the best industry credits reflected a somewhat similar pattern, starting at 1½ per cent in 1946 and reaching a high of 4 per cent at the present time.

Just how much of a change actually took place in long-term interest rates during the last year? From February, 1956, to January, 1957, Benjamin explained, A bond new issue yields went from 3.20 per cent to 4.67 per cent (+1.47 per cent) and AA bonds from 3.15 per cent to 4.50 per cent (+1.35 per cent). As an illustration, Benjamin cited the example of Pacific Gas and Electric Company, which sold 30-year AA bonds at the end of March, 1956, on a 3.32 per cent yield to the public and at about the end of January, 1957, sold bonds on a 4.50 per cent basis to the public, which would indicate an increase in yield in approximately a year of about 1¼ per cent. However, he added, since the turn of the year when Louisiana Power & Light A bonds sold at 4.67 per cent to the public there has been a definite trend towards lower interest rates with some recent indications of a moderate upswing. On March 6th the Columbus & Southern Ohio Electric Company sold A bonds at 4.33 per cent to the public and on April 9th and 11th the California Electric Power Company and the Mississippi Power Company sold A bonds on a 4.60 per cent and 4.50 per cent basis, respectively.

The pattern for new offerings of preferred stocks during 1956 showed that good grade preferreds were selling at about 4¼ per cent at the beginning of the year and were pretty close to 5 per cent at the end of 1956, Benjamin said. A high point of 6 per cent for a preferred offering was reached by a BAA company in January, 1957 (cost to company was 6.16 per cent), and it is currently selling on a 5.9 per cent basis. Only moderate improvement

has been shown so far in 1957, although the preferreds marketed have been very few and of a mixed credit so that a true judgment on trend is hard to make. One thing that does stand out is the fact that the very scarcity of preferred offerings itself is indicative of the fact that the preferred market is far from settled, particularly for the lower-grade companies. Benjamin continued:

> The higher level of money rates in 1956 and 1957 is considerably accentuated when the financing of the smaller and less-well-known credits are reviewed. We know of many recent cases where smaller companies or companies with lower credit ratings have sold privately first mortgage bonds at a rate substantially in excess of 5 per cent, and are told by investment bankers that if they are able to sell a preferred stock the rate would have to be better than 6 per cent. The smaller offerings by these lower credit grade companies do not lend themselves necessarily to public sale because of the high relative expenses of registration. Therefore, the usual method is the private placement route, and under present market conditions there may have to be considerable shopping around amongst institutional buyers before a sale can be completed.

ONE of the most interesting features in the money market, according to Benjamin, is the yield relationship between bonds and common stocks. During the 1930's bond and common stock yields were somewhat comparable with over-all yields at relatively low levels. Not until about 1935-42 did common stock yields move rapidly away from bonds and in 1942 utility commons were on about a 9.8 per cent yield basis as against 3.15 per cent for corporate bonds. It was not until approximately 1948 that again there was a substantial differential between common and bond yields, with bonds yielding around 3 per cent and utility commons just under 6 per cent. From that time on the gap between the greatest risk security and the lowest risk security gradually began to close until at the present time they are about one per cent apart in the case of new issues of utilities. These figures refer to an average of AAA to BAA companies. Yields are much closer in the case of companies at the lower end of the credit scale, Benjamin said. "Undoubtedly this may cause some switching and perhaps put considerable pressure on common stocks. Following the country's rapid growth and prosperity, we have been in a long upward movement in common stock prices. Historically, when credit tightens as it has, a chain reaction is set off when higher bond yields soon are reflected in higher preferred stock costs and eventually common stock prices are affected."

THE probability is that the over-all supply of funds will be sufficient to meet the needs of industry during the next several years, Benjamin predicted, although a change in the nature of the supply may be significant. The volume of funds made available by the life insurance industry to corporations and the mortgage market will probably be somewhat less than that of the past five years, since sales of governments under the prevailing conditions would entail substantial losses, which some companies are unwilling to take. But the use of the forward commitment by the larger life insurance companies, wherein the lender agrees to make available to the borrower and the borrower agrees to take certain amounts of money at a specified time in the future, has earmarked to a considerable extent the availability of funds for the near future. Benjamin continued:

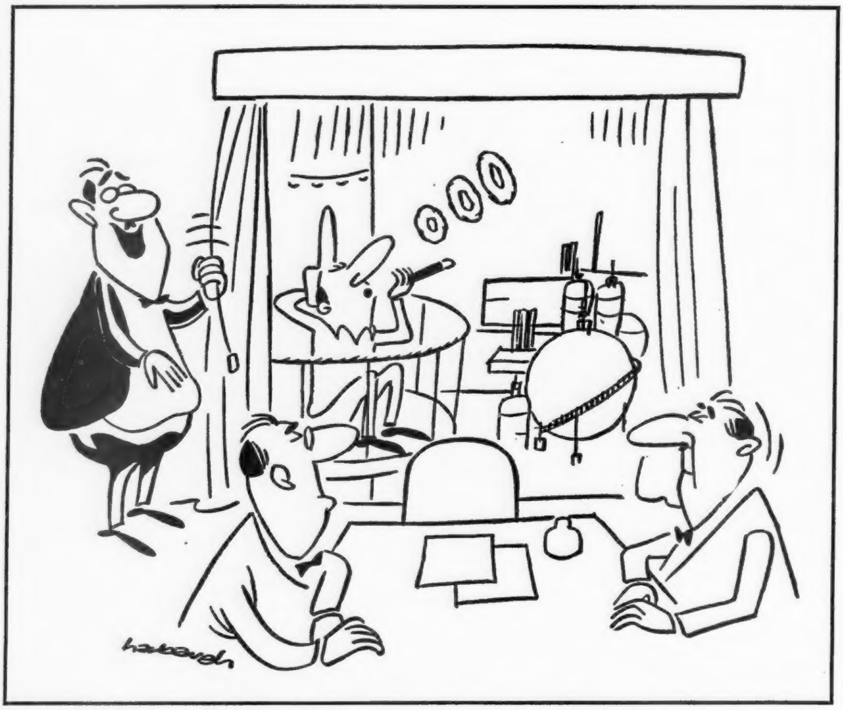
The new look in the money market consists of increased purchases by pension and state funds, small insurance companies, savings banks, and in some cases commercial banks. Pension and state funds have money available because they do not generally invest in real estate mortgages and also because they are not as important a factor in direct placements. Small insurance companies have funds since they are usually unwilling to loan funds for mortgages at as low rates as some larger companies. Also, generally they do not actively participate in direct placements. Savings banks continue to show increasing deposits and they are becoming a greater factor in the new-money market. By and large it appears that these institutions will create more demand for the legal high-grade senior debt securities and less demand for legal high-grade preferreds.

OVER-ALL demand for utility common stocks is still high because of broad market interest and assumed protection against severe fluctuations, Benjamin said. The stability of the industry's securities is a most important consideration. However, Benjamin thinks there may be considerable pressure brought to bear in the future on this particular type of security. As previously pointed out, as bond yields approach common stock yields, there may be switching from a greater risk security into a lesser risk. Higher money costs will reduce leverage and cause a slowdown in earnings even if regulatory commissions give prompt recognition. New money will not return as much as money already invested because of higher costs of installation and less favorable financing. In many cases, since the preferred stock market either is nonexistent or requires abnormally high rates, utilities will be forced to sell common stock in lieu of preferred and dilute earnings even more.

Not only higher rates are involved in the present buyers' market, but more severe terms and restrictions are being demanded by institutions, Benjamin pointed out. Higher call premiums and noncallable provisions are now far from being unusual. Debt limitations and heavier sinking funds are often necessary to market a particular security. Of prime importance, he said, is the closer look purchasers are taking when reviewing a company's future earnings prospects and credit. They are in a position to be extremely selective and, as a result, greater risks feel the pinch by being forced to accept considerably higher money costs than previously demanded, together with restrictions that may prove to be unduly burdensome.

WHAT are managements faced with, then, in raising funds for expansion? Said Benjamin:

> The larger and stronger companies can pretty well follow their usual pattern of 45 per cent to 55 per cent first mortgage bonds, 5 per cent to 10 per cent debentures, 10 per cent to 15 per cent preferred stock, and the balance in common stock, using bank loans for short-term requirements. They will pay higher rates and encounter stiffer terms, but, except for that, they should be able to finance. The smaller and weaker companies will find that the demand for their preferreds has lessened materially and in many cases has disappeared for the time being. They therefore will find not only do they have to pay higher rates for debt money and accept harsher terms, but also that their financing will be limited to debt and common or securities convertible into common. This means that they must dilute their com-



"A LOOK OUT THE WINDOW, GENTLEMEN, SHOWS HOW SUCCESSFULLY WE'VE CONQUERED AIR POLLUTION!"

mon at the same time as they are increasing their senior charges. Under these circumstances the tendency may well be to reduce construction, which is difficult to do in a growing utility situation.

THE important point as far as utilities are concerned is the effect higher money costs will have on the rate of return, said Benjamin. "In recent years," he said, "the public and the industry have largely been led to believe that there is something magic about a 6 per cent return, and many commissions have used this as a yardstick upon which to base rates. The question here is whether such a return will be allowed to be increased when there is a severe upward revision in money rates. As a matter of interest, the well-known auditing firm of Arthur Andersen & Co., in a study of average rate of return permitted by state commissions from 1919 to 1954, indicates that the excess of return over Moody's average bond yields averaged about 2.17 per cent for the entire period. Up to 1930, the average rate of return was, in general, in excess of $7\frac{1}{2}$ per cent and not until the 1930's and thereafter did it drop to something in the neighborhood of about 6 per cent or slightly lower. The average for the entire period was approximately $6\frac{1}{2}$ per cent. It is pointed out by the Andersen study that the rates of return through 1939 or 1940 were related to fair value, or a value somewhere between net book cost of a company's facilities and net reproduction

value. If these returns had been related to original cost during the periods prior to 1939, they would have been materially higher and a wider spread between interest rates and return would have prevailed."

THERE is reason for concern, Benjamin said, over the credit standing of the industry if pressure on common stocks, due to reduced leverage, leads companies to weaken their capital structures by resorting to heavy increments of debt in order to finance construction. Benjamin said this basic building block of credit is in danger because of the reduction in leverage which is now taking place and which clouds the future. He explained:

> . . . From the common stockholders' viewpoint it is the future that counts. Unless a company can earn a return on capital additions definitely higher than the interest and dividend rates on new senior funds, there is little inducement for the equity investor to assume responsibility of capital management or the risks inherent in his junior position. This would apply in particular force to rapidly expanding companies. If an adequate margin of equity earnings is not maintained there will develop a real question of whether the present level of common stock prices will and should justifiably continue. Replacing worn-out property at present-day prices requires raising fresh high-cost capital with no increase in earnings, unless developed by company growth or allowed in rate proceedings. Herein lies the danger, since such a situation could logically result in a deteriorating common market that would keep companies from following conservative financing patterns. Again we would like to emphasize that there would be very little incentive for an investor to buy a common stock in a company that was showing only a static trend in earnings under its existing regulation. Why should he put money in what amounts to a fixed income situation when he normally could expect to have better appreciation in commons of sound industrial concerns or in utilities where there is growth and where the regulatory atmosphere is favorable. The investor has a wide range of choices and unduly restricted earnings in the utility industry may jeopardize in varying degrees the price at which companies can obtain new equity money.

THERE are encouraging signs that the higher costs of money are being recognized by both the Federal Power Commission and certain state commissions, Benjamin continued, pointing to recent state and federal regulatory rulings.

The Wall Street Journal, he noted, recently reported that a survey of well over half of the nation's public service commissions indicates that public service commissions are certainly well aware of the fact that it will be necessary, in general, to allow a higher rate of return to compensate for increased costs of money.

Furthermore, in a study made some time ago it was indicated that out of the 42 states and the District of Columbia having active commission regulation of utilities, 17 jurisdictions had regulatory statutes which required the determination of fair value or reasonable value for rate-making purposes.

Today, said Benjamin, the utilities in the state of Indiana are operating under such a statute and the neighboring states of Illinois, Michigan, Ohio, and Kentucky recognize the importance of giving weight to fair value. Benjamin commented that

> Perhaps this is one of the basic reasons that the utilities in these states

have shown and are estimated by FPC to show some of the best growth potential in the United States. As a matter of interest the Federal Power Commission has estimated that the electric load growth in Indiana for the next ten years will be the greatest in its particular area grouping which includes the states of Michigan, Ohio, and West Virginia. Undoubtedly, the regulatory atmosphere in which these utilities exist has helped make it possible for them to attract the large amounts of capital needed in competition with others for the purpose of meeting the demands of the areas served. Without reasonable treatment from the state utility commissions it is questionable whether the utilities concerned could have withstood the impact of such a large expansion program without deterioration in credit. It is a tribute to both the commissions and the utilities that they have been able to work together so that the companies have come out of a period of great expansion with excellent credit.

BENJAMIN recommended that companies seek a closer and continuing relationship with the commissions and staffs themselves so that all concerned are kept up to date on current and pending matters. "Only by doing this can the benefits of mutual and thorough understanding of common problems be achieved," he said. "Too often in the past, some companies and the commissions were completely apart and much misunderstanding resulted. Since companies and commissions by nature are concerned with consumer opinion, good public relations are vital. In addition to maintaining high standards of service, the company must also keep the public fully informed on its plans and problems. An effective information campaign is most helpful at the time when a rate increase is needed because an informed public will usually not oppose a realistic approach to the request for higher rates."

REGULATORY relief, of course, is not the sole answer to the utility industry's problems, Benjamin pointed out. In all cases the companies must seek to maintain the most efficient methods of operation and utilize as fully as possible new developments in the industry itself. Some of the areas to be watched, he said, are the following:

1. In the case of gas companies, for instance, full utilization of peak shaving to reduce demand charges should be carefully worked out. This goes hand in hand with the possibility of developing storage facilities which are geologically possible in certain areas in Indiana. For example, the Atlanta Gas Light Company has recently completed a new type of storage plant. It stores propane under refrigeration with very substantial savings in capital outlay.

2. Complete review of office and clerical operations result in substantial savings through the eliminations of duplication of records and effort which exist in most organizations. In addition, the applications of modern machines to meet individual company requirements have now been developed to a point whereby the use of such equipment has many advantages, particularly when a company is expanding rapidly and is continually faced with the problem of securing qualified personnel. At the same time it helps to solve the problem of shortage of office personnel in the face of greater requirements brought about by company growth and development.

3. The use of accelerated depreciation definitely would postpone the raising of substantial amounts of cash which is important at a time of high

money costs. A very simple example of the cash savings from accelerated depreciation may serve to effectively illustrate this point. If a company is spending $10 million a year on new construction with a 30-year life, the cash deferment in ten years would total about $5.7 million.

4. Merchandizing activities by the company, retail stores, or both should be co-ordinated so that maximum load-building potential will result. A close review of sales policies and personnel is essential to a successful program. Advertising and credit elements must be reviewed in the light of modern practice and tailor-made to an individual territory.

5. In the case of electric companies new procedures are being developed resulting in substantial economies, with respect to the sampling of meters on a scientific basis in place of 100 per cent of the meters being tested at regular intervals, which greatly reduces the number of meters checked annually. Where a meter-testing program based on an eight-year cycle was formerly considered necessary, it can be extended on a scientific sampling basis so that only about 5 per cent of the meters in service need be tested each year or in effect on a 20-year schedule. Two state commissions have approved such a procedure.

6. The pooling of electric-generating facilities with other companies has proved beneficial and economical in many cases because of lower over-all costs and higher debt capitalization limits.

7. We consider forward planning essential. We put a great deal of weight on long-range forecasts which show in a relatively simple form what the company estimates its future to be. Such forecasts should be reviewed continually and at least once a year at the time the company's budget is prepared. From an operating standpoint they are indispensable because the company's officers are able to check in advance any weak spots that may show up. The timing of financing in order to maintain a sound balance between debt and equity is one more important reason for setting up such forecasts. We believe that utility financing cannot be done primarily on a year-to-year basis but must take into consideration estimated future requirements for the purpose of maintaining an orderly program of security offerings and allow for flexibility of financing in a time of rapidly fluctuating money market conditions.

THE utility industry is one of the most dynamic in this country, Benjamin said in conclusion. It represents a check on inflationary forces because it is a prime factor in increased productivity. The very products being sold are necessities and constitute a base for the economic development and welfare of our country. In other words, he said, as our standard of living and industrial development improve and broaden, "the problem seems to be the ability of the gas and electric utilities to provide sufficient services to meet the requirements. We believe that they can and that they will. However, planning for utility expansion must also give weight and thought to the basic return for investors since utilities are competing with the government, industry, and individuals for ever-increasing amounts of funds."

Many utility securities represent excellent values, he said, both from the standpoint of attractive yield and market appreciation, as may be seen from the wide use and acceptance of utility securities in almost every major portfolio. The informed

investor has confidence in the industry and recognizes its potential. Benjamin believes that such confidence is well merited and will be rewarded with substantial gains.

Public Relations Only Answer to No. 1 Problem

It may come as a surprise to a number of utility executives, but there are quite a few people in America who think electricity, gas, and water should be free. Also some say: "How come I never get electricity paid for? Every month comes a bill. I am getting tired of it. I do not like the outfit that does this to me."

How stupid can people be, you may ask. Very. And unreasonable too.

People are the cause of all of our troubles. If it were not for people we would not have any problems. Not much fun either, of course.

But people are also customers of electric companies. In fact people are the only customers anyone has. Horses, fish, and flies do not buy stuff.

Another sobering thought is that electric companies remain in business by the vote of these people. The most serious problem that electric companies face today is competition from government. And government is people. So our No. 1 problem is people, not engineering, accounting, or sales, vital as these may be. How electric companies get along with people and what the people choose to do about them is a matter largely of public relations.

Public relations costs are like doctors' bills, one public relations "expert" explained in a recent article addressed to business management. If business has a high temperature and a runny nose it is time to pump some public relations dollars and time into the veins, according to this analysis. When the patient is kicking high and cheeks are rosy, you pull in public relations effort. Unfortunately many businesses seem to follow that kind of ill advice. As a result most so-called public relations programs are anemic and ineffective.

What should engineering, accounting, or sales cost? They should cost whatever it takes to get the job done. And so with public relations. It is entirely likely that the heaviest public relations effort should be made when business is at its best. When problems seem to be the least pressing.

Many business executives today seem to think of public relations as newspapers, radio and TV publicity, company motion pictures, printed pamphlets and booklets, speeches, and press conferences. Unfortunately quite a number of firms whose business is public relations work under the same impression. Public relations may include some or all of these efforts, but they are far from the most important ingredient in a sound public relations approach.

A well-written story about the company granting a scholarship to Siwash College, appearing on page one next to a picture of the executive vice president handing Sycamore Jones the check is a part of good public relations. But at that very moment some clerk at the meter application desk may be telling a customer "you'll have to pay this deposit or we won't give you service."

Clippings of the newspaper publicity on the scholarship will be pasted all over the place, and everyone will be pleased. The negligence of the clerk in dealing with customers, who are all people, will perhaps get no attention. In fact no one may know it is going on unless a public relations program gets down to dealing with the

public where the public is. Making certain all persons who contact the public regularly are properly trained and do their job properly, that is public relations. This may involve moving the vice president in charge of meter applications to some other job, or no job at all, if that is what it takes to give the people courteous, efficient attention.

UPON the ability of utilities to successfully deal with people rests their future, in fact their life. These people act mostly emotionally and not rationally. They include the kind that think electric companies manufacture nothing and therefore get rich on something that should be free.

Evidence established over the past seventy-five years proves that electric companies will not likely be stumped by any problems in engineering, accounting, or sales. But the time has long since passed when you can stay in business by successfully meeting these issues only.

The most serious problem facing the electric industry today is government encroachment. Government is people. They will vote electric companies in or out of business because of failures in public relations, not failures in engineering. Most people's opinion about electric companies will not be changed with graphs and charts. Some babies need to be kissed.

If this matter of developing the right attitudes among people is the most important problem facing electric utilities, and most will agree that it is, then why don't these companies "get with it"? Apparently it is because of lack of a proper understanding of what public relations really is. Added to that is a lack of faith in public relations to get the job done. For this condition so-called public relations people themselves must take much of the blame. They have wanted to do it the easy way instead of what it takes, the more difficult and nonglamorous grass-roots attack.

SOME indication of the management's evaluation of the importance of various company functions can be found in the records of promotion at the executive level. Of 126 promotions to top electric company posts announced by a trade publication over a period of several months, 114 were in the field of engineering, finance, and law. This in spite of the fact that public relations is the industry's No. 1 problem and concern.

There can no longer be any question about the fact that dealing with people has been developed into a rather exact science. Expertly applied it produces definite results. But these results can be accomplished only when it is attacked with the same level of prestige, time, and money as were those problems of accounting, sales, and engineering which have been mastered in the last seventy-five years.

Public relations will not cure problems that arise with utilities or any other business unless it has had a part in the events out of which these problems grow. Public relations cannot prevent legislation from being passed or orders from being issued. Public relations can prevent the need for the legislation or the order, the same as planning and building ahead prevents the power shortage.

The cost of public relations is nothing like the cost of doctor bills, unless the patient goes to his doctor every year for a check up and to his dentist twice a year. So what does public relations cost? If done correctly it costs plenty—just as much as engineering, accounting, sales promotion, or legal services. If management needs to stop and ask about the cost, better forget it. What is the problem and how do we solve it must be the No. 1 question.

When approached in that manner the problem will be solved, and the cost will probably be surprisingly low. Public relations can do the job, but it is daily medicine, not a pill for emergencies.

—SAM SCHWIEGER

The Regulation of Natural Gas

"THERE appears to be no decisive reason why market competition cannot generally regulate the field price of natural gas in the public interest."

This is Dr. James W. McKie's conclusion in a study entitled *The Regulation of Natural Gas*. The study, recently released by the American Enterprise Association, is particularly timely in view of the controversy surrounding proposed legislation to ease federal controls over natural gas producers.

"As a rule we turn to direct regulation of price only in cases of 'natural' monopoly in some essential industry," the author explains. Noting the "upwards of 8,000 producers of natural gas in the United States," Dr. McKie finds that "the structure of the industry, however, exhibits no high degree of concentration."

He states:

> Concentration is lower than in any other extractive industry except bituminous coal, and it is quite low by the standards of manufacturing industries. Over 300 manufacturing industries, according to Census count, exhibit higher concentration than natural gas.

Since the Supreme Court ruling three years ago in the Phillips case, which subjected the price of natural gas in the field to federal regulation, public policy toward the natural gas industry has been in a state of suspense.

The purpose of the study, Dr. McKie begins, is to "disentangle the economic principles from this conflict of interests, to determine whether an enlightened public policy can best serve society by regulating natural gas as a public utility or by leaving it to the forces of the open market."

Dr. McKie notes all the various arguments made in support of direct regulation of natural gas producers. After a thorough analysis of the question he concludes that open market competition is the answer.

"Public utility regulation always works imperfectly," he proclaims. "It is wholly inappropriate for competitive industries," and "the structure of natural gas production has become more competitive in recent years, not less."

"At present few pipelines are restricted to a single gas province, let alone a single field or single supplying company. Not only are they connected with alternative supply sources but they are interconnected with each other."

"If any gas producer should attempt to hold out for a higher price than the other producers, he will simply lose his market."

FURTHER, the author expresses doubt that a proper "rate base control" can be found. "It is fair to say," according to Dr. McKie, "that no cost standard for pricing gas yet exists; that there are no workable public utility principles of cost and value which the regulatory authority could apply to the whole gas production industry."

In this connection, Professor McKie notes that "It is a well-known principle of economics that an attempt to increase, decrease, or transfer income by changing the competitive price of a commodity results in market distortions, surpluses, or short-

ages. The experience with rent control and farm price supports is ample evidence."

An important feature of the natural gas-producing industry which clearly differentiates it from public utilities is the degree of risk involved. For ordinary public utilities risk is low and a fair rate of return can be computed. "The risks in gas production and exploration on the other hand are enormous, and virtually immeasurable." Dr. McKie points out:

> The uncertainties of oil wildcatting are legendary. In 1955 the industry drilled 8,100 wildcat wells in the search for new oil and gas fields. Only 918 of these ventures discovered new reserves —a success ratio of about 11 per cent. Some of the new fields discovered were very rich in oil or gas, but others were so small that they could hardly repay the cost of developing them, and contributed nothing toward defraying the cost of the over-all exploratory program.

IN his study, Dr. McKie discusses the Supreme Court decision in Phillips Petroleum Co. *v.* Wisconsin ((1954) 347 US 672, 3 PUR3d 129) which subjected the field price of natural gas to Federal Power Commission control, and the attempts in Congress, notably the Harris-Fulbright and Harris bills, to counter this decision.

In his analysis of the 1957 Harris Bill, the author stresses that while it would exempt natural gas prices in the field from public utility type rate base regulation by the Federal Power Commission, it would not free them altogether from the commission's supervisory powers.

He states:

> Because of the fact that the distribution end of the gas industry is a public utility the standards of workable competition at the producing end must be strict. A proposal to exempt the field price completely from any kind of public supervision would probably be politically unacceptable.

If, however, "the Federal Power Commission retains supervisory powers [as it would under the Harris Bill] in a régime of market competition it can deal with special situations where monopolistic imperfections are substantial." And, the author concludes, "If the commission can make the appropriate adjustments in special noncompetitive situations, there appears to be no decisive reason why market competition cannot generally regulate the field price of natural gas in the public interest."

Dr. McKie is a professor of economics and business administration at Vanderbilt University. Well-known as a scholar in the fields of industrial organization and public policy, business economics, transportation, and public utilities, he is coauthor of the book *Economics of Mobilization and War.*

"APART *from defense and survival, there is a changing public opinion toward the federal budget.*

"There is a growing awareness that the long-overdue tax cuts must be preceded by economy in federal spending.

"The barrier lies in the mental attitude that any substantial pruning of expenditures entails possible giving up federal functions. Rejection of unnecessary functions may indeed be progress."

—M. S. RUKEYSER,
Columnist.

The March of Events

Utilities Form Atomic Corporation

FORMATION of Southwest Atomic Energy Associates, a corporation sponsored by 13 investor-owned electric companies, was announced late last month by Edgar H. Dixon. Mr. Dixon has been chairman of the Edison Electric Institute Committee on Atomic Power for the past four years and is president of Middle South Utilities, Inc. The newly formed organization will initiate a research and development program aimed at practical use of atomic energy as a supplemental fuel for the future electrical needs of Arkansas, Louisiana, Mississippi, Kansas, Missouri, and Oklahoma.

The companies that have joined the new organization are among the principal suppliers of electric power in the several states in which they serve and include electric utilities which formed the Southwest Power Pool during World War II.

Objectives of the new nonprofit corporation, according to Mr. Dixon, are to undertake a program of research and development that will (1) contribute to the advancement of the technology of atomic power reactors or furnaces and (2) look toward ultimate construction and operation of one or more large atomic power plants with electrical capacity of between 200,000 kilowatts and 400,000 kilowatts each.

The utility companies forming the new organization are: Arkansas-Missouri Power Company, Arkansas Power & Light Company, Central Louisiana Electric Company, Inc., The Empire District Electric Company, Gulf States Utilities Company, Kansas Gas & Electric Company, Louisiana Power & Light Company, Mississippi Power & Light Company, Missouri Public Service Company, New Orleans Public Service Inc., Oklahoma Gas & Electric Company, Public Service Company of Oklahoma, and Southwestern Gas & Electric Company. These companies together serve a total of 2,225,000 electric customers.

Other companies that are considering joining the new organization are The Kansas Power & Light Company and Western Light & Telephone Company.

Delaware

Phone Rate Increase Sought

AN application for increased telephone rates, to yield approximately $1,880,000 in additional annual gross revenue, was filed with the Delaware Public Service Commission last month by the Dia-

mond State Telephone Company.

In its petition, the company said "the proposed increases are necessary to enable it to pay its operating expenses and taxes, to pay interest and dividends upon its outstanding obligations, and to obtain on reasonable terms the additional capital needed to finance the construction required in Delaware during the immediate future."

Florida

Governor Signs Utility Tax Bill

GOVERNOR Collins last month signed into Florida law a bill designed to permit the taxation of municipally owned utilities when they operate in competition with private companies. The governor said he decided to sign the bill although "the ultimate effect of this measure will have to be determined by the courts as applied to specific factual situations."

"Reasonably applied," he said, "there seems to be substantial merit in this measure."

The act leaves property of cities' utilities used "exclusively for municipal purposes" exempt from ad valorem and personal property taxes, but is designed to make them subject to taxing if they sell power outside their normal service area. Governor Collins said the drafters intended that the statute would subject to taxing the property of city utilities when they go outside their normal areas and sell power in competition with privately owned companies which are taxed.

"Actually," he added, "I feel that under the American system of free enterprise and our Constitution it is but fair and right that tax immunity should not go beyond normal and reasonable municipal use."

The cities of Jacksonville and Tallahassee now own utility facilities outside the counties in which they are located. Orlando has plans to build a power plant in an adjoining county.

Closer Look at Utilities Planned

THE state railroad and public utilities commission was recently reported preparing to take a closer look at the rates of all utilities operating in Florida. Bolling C. Stanley, executive secretary of the commission, said the commission had hired two field auditors, effective July 1st, "who will be dropping in at utility offices from time to time to check their books."

Previously the commission based its rate checks on annual reports filed with the commission rather than on field audits. Mr. Stanley said the commission also intends to maintain closer checks on power, telephone, rail, and trucking companies.

He asserted the commission "has no plans at the present time to order Florida Power Corporation to reduce its rates." Florida Power Corporation's stock dropped sharply recently when the state commission ordered Florida Power & Light Company to cut its rates by July 15th.

Pennsylvania

Utility Relocation Bill Passed

A BILL which opponents said would "raid the public till" to give public utility companies a "break" cleared the state legislature recently and was sent to Governor George M. Leader for action.

Under the measure, the State Motor License Fund would pay for the cost of moving utility property to make way for the construction of federal-aid highways.

The vote in the state senate was 35 to 11, crossing party lines. Senator Joseph J. Yosko, Bethlehem Democrat, led the fight against the bill. He said it was part of the Republicans' legislative pattern to give everything to industry at the expense of the "little guy." He added, "It gives the Democrats one of the most effective campaign issues they have had in a long, long time."

Senator Yosko served notice that he intended to ask the governor to veto the measure.

Transit Line and City Sign Pact

ATTORNEYS for Philadelphia Transportation Company and the city of Philadelphia recently signed a new five-year operating agreement which bars the company from paying dividends until 1958, and revokes a 30-cent dividend declared last August.

The signing of the pact ended a dispute extending back for more than a year, over the renewal of a 50-year-old operating contract between the city and the transit firm.

The so-called "1907 agreement," under which the PTC operates certain city-owned subway and elevated railway facilities, expired on July 1st.

The new agreement must be approved by PTC's board, the Philadelphia city council, and the state public utility commission.

Under terms of the agreement, PTC "agrees that it will not pay any dividends until December 31, 1957." It also includes stipulations that dividend payments following that date will not be made until the company has met financial and maintenance obligations.

Washington

Power Agency Chief Chosen

AT its organizational meeting in Olympia last month, the state power advisory committee elected Victor A. McMullen, Wenatchee fruit grower, chairman. The five-man group was created by the last legislature to advise the state director of conservation, Earl Coe, in connection with the new division of power resources to be established in Coe's department. Coe asked the committee to help him set up the new power division on a basis to serve all facets of the power industry, both private and public.

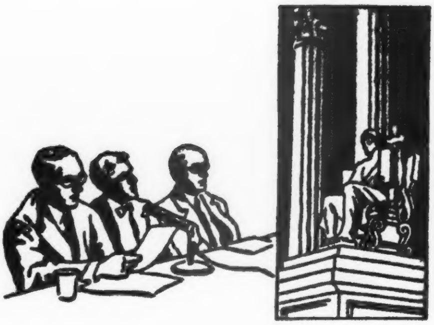
Dean Barline of Tacoma, representative of municipal power, said "It may take a selling job to show that the new power division is in a position to work for the utilities instead of just another agency to work in competition with them."

"For the first time we are going to have that kind of a deal," Coe said. "Our goal is to have enough power for the state of Washington. We must not fall into the trap of being known as a public or a private power committee."

The representative for the public utility districts suggested that the new agency make an up-to-date survey of potential power sites as a starting point.

George M. Brunzell of Spokane, private power representative on the advisory committee, proposed that power information available to various private and public utilities be sent to the new state agency where it could be co-ordinated for the benefit of the entire industry.

Progress of Regulation



Trends and Topics

Discrimination against Customers Of Public Utility Companies

THE Supreme Court has not yet ruled on the question whether discrimination against certain classes of citizens using public utility service violates constitutional rights, although it has interpreted laws which, for various reasons, permit concessions. It did, however, in deciding a controversy between the Western Union Telegraph Company and the Call Publishing Company back in 1901, state the principle that all individuals have equal rights, both in respect to service and charges (181 US 92). What about discrimination against the large group of citizens who buy electricity from power companies?

The compromise reached by the Senate Public Works Committee on a bill to permit construction of a power project at Niagara Falls by the New York Power Authority provides for a preference clause. Rural co-operatives and municipal plants would be preference users. Their share of electricity produced by the plant would be far in excess of their proportionate share of customers.

Reasons for Preference

The word discrimination, in the sense of illegal discrimination, usually means undue preference or undue prejudice. There is discrimination without good reason. There may, of course, be differences in types of service and in rates because of conditions which justify such differences. It costs less to supply service at wholesale than to supply service at retail. That may justify a difference in charges. Discrimination based on the legal status of the purchaser is something else.

Discrimination in favor of public bodies has not been approved by regulatory authorities except to the extent required by statute. In Massachusetts a statute permitting reduced telephone rates to the commonwealth or to any city or town, it was held, did not contemplate reduced rates to a county (60 PUR NS 52).

Concessions to Federal Government

Lower rates for gas service to Army airfields were disapproved in Alabama (75 PUR NS 185). The California commission rejected a claim for a lower gas rate to military establishments than that established for other customers, on the ground that it would be unfair (82 PUR NS 473). The New Jersey commission refused to approve a lower gas rate for service supplied to a fort (75 PUR NS 183). A preferential telegraph rate for the government was deemed discriminatory and unwise from a practical standpoint in a North Carolina case (64 PUR NS 254).

Discrimination in favor of the federal government has, however, been permitted under some laws, as in the case of railroad transportation of gasoline to an Air Force base in Louisiana (5 PUR3d 339).

The principles involved in these decisions would seem to have application also to discrimination in rates and service to states and political subdivisions. The Massachusetts commission, in one case, said that a municipal government is to be considered strictly as a customer of an electric company, and the fact that taxpayers, upon whom the burden of municipal costs falls, are in large measure also individual customers of the utility does not permit the utility to furnish service to the municipality except at fair and reasonable rates (96 PUR NS 77).

Discrimination between Distributors

The North Carolina supreme court decided that a hydroelectric company supplying current for resale must extend the same treatment to all persons and corporations (PUR1920D 560). A gas pipeline company was required in Oklahoma to extend service to a distributor on the same terms as it had contracted to sell to another distributing utility operating in the same territory (PUR1931B 116). The Federal Power Commission ruled that a pipeline company must not discriminate between gas distributing companies and that uniform rules should apply to all when there is a curtailment of service because of a lack of supply (73 PUR NS 371).

The fact that a city resells to its inhabitants electricity purchased from an electric company, the California commission said, is not a sufficient reason why the citizens of that city should not bear their fair proportion of increased costs of production (PUR1919B 942). The same commission once stated that a practice of granting preference in electric rates to companies or cities reselling electricity is not justified and results in discrimination against the general public outside of municipalities favored (PUR1921D 65). More recently, it ruled that rates for natural gas service to a municipality for resale should not go below the level which would protect the utility's other customers from paying any of the costs properly assessable to the city service (82 PUR NS 473).

Preferences in allocating power to municipal plants and co-operatives are actually preferences to their customers. Customers of public utility companies pay the full cost of service supplied to them but are not given the right to take an equal share of electricity produced by publicly owned hydroelectric plants. They carry the usual tax burdens carried by customers of municipal

plants and co-operatives; and they also pay taxes which those customers escape, by paying rates to electric companies sufficient to cover company taxes.

Separate Classification of Co-operatives

Circumstances may justify different classifications of distributors, and utility companies have recognized this fact. Justification, however, is based on approved regulatory principles, not the desire to favor public ownership. A public utility may, according to the Oklahoma commission, for the purpose of encouraging the development of rural electrification, establish a lower rate level with the approval of the regulatory body for service to rural co-operatives (57 PUR NS 159).

A Pennsylvania court held that an electric company was not unlawfully discriminating against one engaged in the business of distributing electric current for light, heat, and power and granting an unreasonable preference to an electric co-operative by selling current to the latter at a lower rate, although the former bought more current each month, where the evidence showed a difference in service conditions, points of delivery, and apparatus furnished (36 PUR NS 111). The Virginia commission approved the practice of a power company in charging different rates to different classes of consumers and placing co-operatives in a class by themselves (86 PUR NS 129).

In Colorado it was ruled that a rural electric co-operative was not a department of government but an instrumentality of government and therefore the doctrine of "preferential rates to the government not being discriminatory to its competitors" did not apply (48 PUR NS 180). But a special classification of rural electric association projects by utilities selling current at wholesale was held to be justified on the grounds of ability of customers to pay, advantages to the public, and the right of utilities to meet, by low rates if necessary, the threat of new competitive generating plants.

Legislative Approval of Preferences

These references to some of the decisions on discrimination indicate views of regulatory authorities, but up to this time, apparently, no curbs have been placed upon legislative action. Whether preferences may be established without infringing upon constitutional rights is still undecided. The question whether preferences are right or wrong, fair or unfair, is discussed in PUBLIC UTILITIES FORTNIGHTLY, September 13, 1956, at page 397.

Review of Current Cases

Rate Reduction and Use of Hypothetical Ratio Upheld

THE Louisiana supreme court has reversed the lower court judgment (15 PUR3d 328) which had set aside a commission order (14 PUR3d 146) substan-

tially reducing the Southern Bell Telephone & Telegraph Company's rates. The commission had ordered the company to reduce the intrastate revenues by $3,940,000. To effectuate the reduction, the commission had directed that public pay station rates be restored to 5 cents for local calls, and all intrastate toll rates be diminished by 20 per cent.

The commission had found that the 21.3 per cent debt ratio of Southern Bell, which is a wholly owned subsidiary, was uneconomical and imprudent. The capitalization had been reconstructed, using a 45 per cent debt ratio.

Under this cost of capital approach, it was found that the company's rates in Louisiana were excessive. The commission had also announced its intention of applying the cost of capital method to all utilities within its jurisdiction so as to obviate a charge of discrimination.

Commission's Reasoning Not Fallacious

The far-reaching implications of the commission order were summed up in the company's brief. While the amount of the reduction was not serious to the over-all system—amounting to only a few cents per share on AT&T stock after tax savings—nevertheless it was a blow, said the company. There was a possibility that some of the commission's "fallacious" reasoning might influence other regulatory bodies to take similar viewpoints, without checking the accuracy of the arguments advanced.

The contention that the action of the commission is fallacious, answered the supreme court of Louisiana, is fully answered by the holding in the Hope Natural Gas Company case (1944) 51 PUR NS 193. It was held there that, under the statutory standard of "just and reasonable," it is the result reached, not the method employed, which is controlling.

Cost of Capital Method

With regard to the application of the "cost of capital" method, the peculiar situation of each utility, which is largely reflected in its cost of capital, dictates the level of its earnings. There is no constitutional requirement that every regulated company be allowed the same rate of return. Each company is allowed to meet its own legitimate cost of doing business, although the rate of return may vary. The relevant facts and circumstances are to be considered in order that each is given an equal footing in the competition for new capital. The record showed that the commission had considered the relevant facts and circumstances.

The company had contended that in computing its earnings requirement, the commission had increased actual earnings by $596,000—a theoretical amount by which income taxes would be reduced—with a 45 per cent hypothetical debt ratio. Such fictitious increase in income and downward adjustment in income taxes was based upon the claim that the company should be considered as having long-term debt in its capital structure (which it did not have) and as having paid interest upon that long-term debt (which it had not paid). The company further argued that the commission had invaded the reasonable range of discretion of its board of directors. Its officials had testified, in substance, that the existing debt ratio of approximately 22 per cent was the result of prudent and sound policy.

The court concluded that there were no circumstances which would authorize a finding that the commission's action was arbitrary, capricious, and confiscatory. There is no prescribed formula for the fixing of "reasonable and just rates." The commission supported its capital structure determination by authority. It was not presently patent and obvious that the com-

pany would be unable to realize a fair and just return on its investment on the assumed capital structure.

The commission had kept the door open for a revision of its order, after a trial and the hearing of evidence in the same proceeding in which the order involved was rendered. Moreover, the utility had been receiving short-term loans from its parent. *Southern Bell Teleph. & Teleg. Co. v. Louisiana Pub. Service Commission, 94 So2d 431.*

Authority of Federal Power Commission to Act upon Application For License Not Restricted by Treaty Reservation

THE federal court of appeals set aside the order of the Federal Power Commission dismissing an application by the Power Authority of the State of New York for a license for a hydroelectric project to develop and utilize waters of the Niagara river, on the ground that a reservation by the United States Senate, in consenting to ratification of the 1950 Treaty with Canada, was not a part of the treaty which would bar commission action under the Federal Power Act.

The Senate had attached a reservation to the effect that no project for redevelopment of the United States' share of waters should be undertaken until specifically authorized by an act of Congress. The Foreign Relations Committee of the Senate agreed that the question was domestic in nature and concerned the United States constitutional process alone. It recommended the reservation because without it "the redevelopment for power purposes would be governed by the Federal Power Act." The committee intended by the reservation to retain that power in the hands of Congress.

Decision by Federal Power Commission

The Federal Power Commission, in denying the application, said that it could not determine questions as to a reservation of congressional power being a part of the treaty, the constitutionality of a reservation by the Senate in advising and consenting to the ratification of the treaty, or whether the reservation became a part of the treaty through its acceptance by Canada and proclamation by the President. The commission decided that it could not determine the validity of the Senate action (16 PUR3d 55).

The commission accepted the reservation as binding and entirely authoritative as "the supreme law of the land" under Article VI of the Constitution.

Reservation Merely Expression of Domestic Policy

The question, said the court, was whether the reservation became "law of the land" as part of the treaty. The reservation did not have the concurrence of the House of Representatives and therefore was not "law of the land" by way of legislation. The commission argued that the reservation was an effective part of the treaty because: (1) it was a condition of the Senate's consent to ratification; (2) the condition was sanctioned by the President, was "accepted" by Canada, and was included in the exchange of ratifications; and (3) it "thus became a part of the treaty." Simple as this argument seems, said the court, it could not agree with it.

Canada had accepted the reservation because its provisions related "only to the internal application of the treaty" within the United States and did not affect Canada's rights or obligations under the treaty. The Canadian view, said the court, was shared by the President, the Department

of State, and the Senate. The reservation made no change in the treaty. It was merely an expression of domestic policy and was not a counteroffer requiring Canadian acceptance before the treaty could become effective. That Canada did "accept" the reservation did not change its character. It was not so much an acceptance as a disclaimer of interest.

No court has ever said, it was pointed out, that the treaty power can be exercised without limit to affect matters which are of purely domestic concern and do not pertain to relations with other nations.

The judge delivering the opinion of the court said that if we attempted to use the treaty-making power to deal with matters which do not pertain to external relations but to control matters which normally and appropriately are within the local jurisdiction of the states, then he would again say there might be ground for implying a limitation upon the treaty-making power, that it is intended for the purpose of having treaties made relating to foreign affairs and not to make laws for the people of the United States in their internal concerns through the exercise of the asserted treaty-making power. The court construed the reservation as an expression of the Senate's desires and not a part of the treaty. The court did not decide the constitutional question.

In reply to an argument that since the reservation was a condition to the Senate's consent to the treaty, to deny effect to the condition vitiates the consent and thus invalidates the whole treaty, the court said that this argument was disposed of by the Supreme Court in New York Indians *v.* United States (1898) 170 US 1. Amendments which the Senate had attached to its resolution consenting to the treaty had not been communicated to the Indian tribes. The court concluded that the amendments were not part of the treaty. It nevertheless treated the Senate's consent as effective to make the treaty valid and operative. *Power Authority of the State of New York v. Federal Power Commission (USCA[DC]) No. 13652, June 20, 1957.*

Orders Severing Competitive Aspects of Applications And Terminating Intervention Held Interlocutory

ORDERS severing the mutually exclusive portion of certificate applications under the Natural Gas Act and consolidating them for comparative hearing on their competitive aspects were interlocutory or procedural orders merely, the Federal Power Commission ruled.

Although applications may encompass proposals to serve both competitive and noncompetitive areas, the commission has followed a policy of directly authorizing construction and sales in the noncompetitive areas. If possible, action looking toward increased service to markets in noncompetitive areas should not be deferred until competitive aspects of applications can be determined, the commission stated. Both the competitive and the noncompetitive aspects need not be commingled in a comparative hearing if portions of them can be severed on an area basis. The rights of competitive applicants can be adequately protected in a comparative hearing limited to the competitive aspects of their respective applications.

It was noted, however, that every certificate applicant in such a comparative hearing must offer testimony with respect to each of the elements that would go into the ultimate determination of their applications, even though similar evidence may have been presented in connection with

other aspects of the same filed applications.

Termination of Intervention

The commission also regarded as interlocutory an order terminating intervention in a certificate hearing limited to serving noncompetitive markets. An application to stay this order was denied. Continued intervention in this limited hearing, it was held, would serve no useful purpose and would merely delay the proceedings, to the detriment of the public interest.

The commission observed that although one certificate application may contain an area of mutual exclusiveness with respect to the application of another company whose intervention has been ordered terminated, the commission is not precluded from issuing a certificate to the one company if it is properly conditioned so as to preserve the area of mutual exclusiveness for a comparative hearing. Although such conditioning might affect third-party relationships and persons not subject to the commission's authority, that fact would not detract from the commission's jurisdiction over the transportation and sale of natural gas and the facilities used therefor. *Re American Louisiana Pipe Line Co. et al. Docket No. G-2306 et al. May 14, 1957.*

Lower Railroad Rates Not Discriminatory

IN two cases involving the same issues, the Nebraska supreme court held that proposed rates governing transportation of petroleum and petroleum products in intrastate commerce were not, under the evidence, unjust, unreasonable, or discriminatory. The commission's order was held to be a valid exercise of discretion, with which the court would not interfere unless shown to be unsupported by the weight of evidence.

The rates in question were generally $1\frac{1}{2}$ cents per hundred pounds less than truck rates on gasoline for distances of 75 miles and over. Any rate that is competitive discriminates to some extent against a competitor, said the court, but that does not make the rate unlawful. Only unjust discrimination or undue preference under substantially similar circumstances and conditions is that which is unlawful and prohibited.

The claim of the appellants that the proposed rates preferred shippers and receivers who had rail shipping facilities and thus discriminated against those who had no such facilities was held to be without merit. To any person who is in a position to use the service offered, commented the court, such service is available. *Chicago, B. & Q. R. Co. et al. v. Herman Bros., Inc. et al. 82 NW2d 395, 405.*

Exchange Offer of Holding Company Stock for Utility Stock Approved

NEW ENGLAND ELECTRIC SYSTEM, a holding company, was authorized by the Securities and Exchange Commission to make an exchange offer for the common stock of Lynn Gas & Electric Company, providing for the issuance of two shares of holding company stock for one share of Lynn stock.

A condition was imposed requiring New England to charge its general reserve relating to investments in common stock of its subsidiaries and credit Account No.

171—Other Deferred Credits—with an amount equal to the excess of the underlying book value of the Lynn stock at date of acquisition over the recorded costs on the holding company's books. New England had proposed to reduce its general reserve relating to investments in subsidiary stocks by a charge to such reserve and a credit to earned surplus for such excess. The commission did not believe this to be appropriate.

Fairness of Exchange Offer

The earnings and dividends applicable to two shares of New England stock have exceeded those on each share of Lynn stock. It was expected that issuance of additional New England stock in exchange for Lynn stock would have little or no effect on the per share earnings of New England stock.

The commission did point out certain unfavorable factors of comparison, however. It observed that the Lynn stock had a higher book value and was superior from standpoint of capitalization ratios.

Objections

A witness for objecting stockholders testified that the offer was unfair to Lynn stockholders. He based his opinion on what he called a qualitative analysis of the two stocks which gave weight to the larger common stock equity ratio of Lynn as compared with that of New England. He believed the lower debt ratio of Lynn made the earnings and dividends on its stock more valuable, dollar for dollar, than earnings and dividends on New England stock.

The commission believed the witness' method of analysis was inappropriate. In reaching a so-called market value for the capitalization of the New England system, he employed market values only as to the common stock while using principal amounts and par values as to the long-term debt and preferred stock in the system. The commission observed that had he used market values for all the outstanding securities as of a date just prior to the announcement of the exchange offer, he would have obtained a somewhat lower price-gross income ratio for the New England system, and necessarily a lower value for the Lynn stock.

More important to the commission, however, was the fact that the witness did not offer any justification for applying to the gross income of Lynn the price-gross income ratio applicable to the New England system. There was no basis in the record for imputing to the Lynn gross income the same market ratio as was applicable to the New England gross income despite the differences between them. The witness made no showing that the market value of the Lynn stock failed to appraise adequately the earnings and dividends applicable to the Lynn stock as an independently owned company and the various qualitative considerations, such as the company's debt-equity ratio, which have a material bearing on the value of the stock.

Implicit in the witness' approach was the assumption that if the New England stock was correctly valued in the market, the Lynn stock was undervalued, or, conversely, if the Lynn stock was correctly valued in the market the New England stock was overvalued. The facts did not support this assumption. Consequently, the commission concluded that the witness' arguments lacked merit.

Other Benefits

The commission also concluded that the exchange offer was arrived at through arm's-length negotiations which embraced consideration of requirements of fairness and reasonableness to all parties involved. The record also indicated that the transaction would produce certain operation and financial benefits to both companies.

If Lynn remained an independent company, it would need substantial funds in the relatively near future for necessary plant additions. On the other hand, as a New England subsidiary, sufficient electric energy would be available from the system's principal generating subsidiary to assure Lynn that its present and future energy requirements would be met. In addition, as a system company, Lynn would have available as a basic foundation in financing matters, the strength and credit of the New England system.

Integration Standards

The electric service area of Lynn lies between the areas served with electricity by two companies in the New England system. There is a direct interconnection between the New England and Lynn electric properties and this interconnection was deemed capable of providing Lynn with that portion of its present and future electric energy requirements not now produced or capable of being as economically produced by its own generating units. The gas service area of Lynn is adjacent to areas served with gas by companies in the New England system, and Lynn and such New England subsidiaries purchase gas from the same supplier of natural gas.

The acquisition of the Lynn stock would, to some extent, increase the total area served by the New England system, but it would not extend the limits of the over-all service area. Nor would the addition of Lynn have a significant effect on the system's annual revenues or its size from the standpoint of dollar value of the assets involved. *Re New England Electric System, File No. 70-3534, Release No. 13456, April 22, 1957.*

Showing of Financial Ability and Compliance with Commission Regulations Required for Certificates

For failure of proof as to financial ability, the Kentucky court of appeals, upholding the commission, ruled that a telephone company was not entitled to authority to convert a magneto system to dial operation and to extend its lines into new areas. In support of its application, the company asserted that it was financially able to undertake the operations which it proposed, but no loan commitment or other concrete evidence of financial ability was offered. The court held that the commission acted properly in denying the certificate.

Certificate to Co-operative Unjustified

The commission was not sustained, however, in granting a telephone co-operative rival authority to construct a dial system and enter territory then being served by the company. The co-operative had not complied with commission regulations governing the form and content of certificate applications. It failed to supply data required to accompany the application, such as copies of local franchises, detailed maps of proposed construction, detailed financing plans, and estimated costs of operation. Besides showing unwillingness or inability of the company to render adequate service, the co-operative was bound to comply with the application regulations. Nor could the commission waive these regulations in the absence of an appropriate order.

The certificate issued to the co-operative was set aside and the case remanded for the commission's consideration in the light of the need for compliance with the regulations. *Kentucky Pub. Service Commission v. Mt. Vernon Teleph. Co. 300 SW2d 796.*

Confiscatory Rate Order Properly Remanded

THE Tennessee supreme court sustained a lower court judgment (10 PUR3d 243) remanding a telephone rate case to the commission for the fixing of reasonable rates, upon a finding by the trial judge that the rates established by the commission were arbitrary and confiscatory. A witness for the commission had testified that additional revenue sufficient to afford a rate of return of 6.5 per cent was reasonable and necessary. Company witnesses called for an even greater return.

The record contained no other evidence on this issue. Less than one-third of the additional revenue claimed was allowed by the commission.

The court observed that a commission order based on findings made without evidence, or on evidence which clearly does not support it, is an arbitrary act against which the courts will afford relief. When a utility is contesting an order and the constitutional question of confiscation is involved, it is entitled to the independent judgment of the court both on the law and the facts.

The fixing of rates is a legislative function and one not to be exercised by the judiciary, it was noted. Since the trial court found that the authorized rates were confiscatory, it properly remanded the proceeding for the establishment of reasonable rates. *Southern Continental Teleph. Co. v. Tennessee R. & Pub. Utilities Commission, 301 SW2d 387.*

Authority to Curtail Gas Service Granted

THE Illinois commission granted a gas company authority to curtail and limit service to certain customers because of an emergency situation. The company's sole supplier was limited by Federal Power Commission order to an amount insufficient to satisfy the growing demands of the area.

If the demand for gas exceeds the amount of gas available, pointed out the commission, a hazard to life, health, and property might result. In order to protect the safety and well-being of the public, measures had to be adopted to prevent the demand from exceeding the available supply.

The order made the curtailment, at the option of the company, applicable to certain customers. The commission made it clear that any action taken by the company pursuant to the order would not constitute unjust discrimination. *Re Town Gas Co. of Illinois, No. 44020, May 21, 1957.*

Adequacy of Existing Service Factor in Certificate Denial

THE application of a railroad subsidiary contract carrier for a certificate of public convenience and necessity authorizing motor passenger and freight service was denied by the North Dakota commission, although the proposed service would not unduly increase highway maintenance cost, existing travel on the proposed route was neither congested nor affected by safety, and the applicant was fit, willing, and able to perform the proposed service.

Existing common motor carrier service within the area was found to be adequate

to meet the needs of the traveling and shipping public. The granting of the application, held the commission, would have a detrimental effect upon existing transportation.

Dissenting Opinion

In a dissenting opinion, Commissioner Vaaler claimed that the majority opinion prevented more efficient and less expensive services. In these days of apparently continuing inflation, said the commissioner, more efficient methods of operation should be welcomed and advocated. The record was clear that there would be no impairment of service.

Shippers supporting the application had shown that service would be better, cost less.

Approval of the application, he said, would have been a step towards stifling the inflation so prevalent in the past decade. *Re Northern Pacific Transport Co. Case No. M-969, May 23, 1957.*

Mandamus Proper to Compel Commission Determination

THE North Dakota supreme court held that where a railroad's subsidiary applied to the commission for certificates of convenience and necessity authorizing passenger and freight transportation by bus, and the railroad applied for permission to change train service, all applications should have been considered together. Under the circumstances, said the court, the commission was not justified in refusing to decide the application of the subsidiary until after appeal from the commission's decision denying the application of the railroad had been decided.

The commission has discretion in the matter of making decisions in cases coming before it for consideration. Courts will not interfere unless there is a clear abuse of discretion, but the fact that the commission has such discretion does not empower it to delay decisions for an unnecessary length of time without showing good and valid reasons for such a delay.

Where a public administrative agency is vested with quasi-judicial powers and discretion to determine questions of fact, held the court, such agency cannot be compelled by mandamus to decide in a particular way. However, the agency can be compelled to take action and to make some determination.

In this case, the commission had not acted upon the application of the railroad's subsidiary, although more than a year had elapsed since the issue had been finally submitted. There was no legal ground for withholding decision. The delay was held to be unreasonable and a lower court had properly issued a peremptory writ of mandamus compelling the commission to make some determination. *North Dakota ex rel. Northern P. Transp. Co. v. North Dakota Pub. Service Commission, 82 NW2d 597.*

Water-softening Rates Increased on Company-wide Rate Base

A WATER utility providing water-softening service to all takers, whether regular water customers or not, obtained a substantial rate increase for this service from the Wisconsin commission. A rate of return of 5.5 per cent was allowed on

a net book value rate base which included not merely water-softening investment but the company's entire property devoted to public use. Only water-softening rates were involved in this proceeding.

Jurisdiction

No question of jurisdiction was raised, though the commission noted that it had taken jurisdiction over water-softening rates in a 1947 proceeding by this utility. In that case the commission observed that this service is a competitive undertaking and that it would be inequitable for general service users not taking the service to be made to subsidize it. Water-softening rates, it was there pointed out, should necessarily include all costs incurred in providing the service. This not only covers salt, mineral, and estimated labor, but actual labor as shown by daily time sheets, plus the superintendent's overhead, maintenance, transportation expense, insurance, wash water, light, heat, space rental, and clerical billing and collection expenses. Depreciation, a tax equivalent, and a reasonable profit must be added.

In that case a dissenting commissioner asserted that water-softening service is a private merchandising business over which the commission had no jurisdiction.

Capitalized Equipment

The applicant furnishes water-softening service by means of individual equipment placed on the customer's premises. The commission indicated that the cost of a new softening unit should be capitalized when placed in service, and that maintenance thereafter should be recorded as an expense. Also, when such a unit is no longer serviceable, it should be removed from the plant account and charged against the reserve for depreciation account. *Re City of New Holstein, 2-U-4756, May 24, 1957.*

Intrastate Rate Equalization Denied

The Montana commission denied the applications of several railroads for authority to increase freight rates so as to conform with interstate increases granted by the Interstate Commerce Commission. There had been no separation or breakdown of intrastate operating revenues, expenses, or properties.

The commission pointed out that, in accordance with court opinion, it had no authority to grant an automatic raise in intrastate rates simply because the Interstate Commerce Commission had granted a raise in interstate rates. Mere disparity between interstate and intrastate rates does not compel the commission to grant an increase so as to remove the disparity.

The instant rate application was in the nature of an original proceeding and was not ancillary to any proceeding before the Interstate Commerce Commission. Applicants had conformed, not with matters of proof properly considered by a state commission, but with proof that might be brought before and considered by the ICC in investigating intrastate rates allegedly resulting in undue, unreasonable, and unjust discrimination against interstate commerce.

The commission would not be influenced by purported ability to prove such discrimination before another tribunal in a different proceeding with different issues and different matters of proof. It would not be influenced by statements of contributions which were being made to the economy of the state by the railroads, amounts of their capital expenditures

within the state, or the depressed and favorable interstate rates under which certain commodities were transported. Before the state board could grant an increase, it had to be shown that existing rates were inadequate to yield a fair return. The burden of so showing was upon the applicant. This, they had not done. *Re Great Northern R. Co. et al. Docket No. 4475, Order No. 2656, March 25, 1957.*

Operation outside Certificate

THE United States district court found that the evidence justified an Interstate Commerce Commission order that a motor vehicle contract carrier cease and desist from engaging in transportation of commodities outside the scope of operating authority.

The carrier's certificate limited transportation to new and used store fixtures, new and used household goods, and stock in trade of drugstores, over irregular routes and named states. The carrier had transported, from nondrugstore consignors, canned grocery items to grocery stores, cream and fruit juices to food manufacturers, and beer and wines to liquor distributors. Although the commodity limitation in the permit did not limit the class or type of persons with whom the carrier could contract, pointed out the court, the articles which had been transported were clearly outside the orbit of certificated authority. *Nelson, Inc. v. United States et al. 150 F Supp 181.*

Specialized Carrier Denied "Cream" of Available Business

AN irregular route motor common carrier, with present authority to transport petroleum products in bulk, was denied additional authority to transport other bulk products by the Colorado commission. Present carrier and rail service had not been shown to be inadequate. Public convenience and necessity did not require the proposed extension.

The commission pointed out that it had endeavored, in the past, to protect line-haul carriers, the carriers who run on schedule and make deliveries to all points in the state. An attempt had been made to give each of the trade communities in the state a localized call and demand common carrier service. Such service, said the commission, was the backbone of intrastate transportation, so it behooved the commission to protect the carriers involved.

The commission was hesitant about granting blanket authorities covering all points in the state on all commodities. This would impair service to the general public, making it possible for specialized carriers to take the cream of available business, and leave to the locally domiciled carriers the skim milk.

One of the dangers of granting authority as requested in the instant case, said the commission, particularly where specialized equipment is used, is the possibility of placing economic restrictions on presently certificated carriers that would not permit them to improve existing service, thereby depriving a large section of the economy of an improved service.

Before the commission will issue a certificate authorizing rendition of any given service, public convenience and necessity must be shown. The rule is less elastic

where the service proposed to be rendered is a duplication of service already authorized, unless it is shown that such service is inadequate and that the carrier is not in a position to, or would not, make it adequate. *Re Pacific Intermountain Express Co. Application No. 15004, Decision No. 47945, May 23, 1957.*

Injunction Granted Pending Certificate Issuance

THE United States district court held that it had jurisdiction over an application by property owners for a preliminary injunction enjoining a railroad from condemning land for proposed new trackage until a certificate of public convenience and necessity had been obtained by the railroad from the Interstate Commerce Commission.

The railroad's proposal, held the court, to extend a present 3-mile trackage to a point 6 miles distant constituted a new line and not a spur, industrial, team, switching, or sidetrack. Since the railroad was engaged in interstate commerce, it had first to obtain a certificate from the ICC before the new trackage could be laid.

The court refused to consider whether pubic convenience and necessity required or would be furthered by the proposed track. The owners of the land were held to be parties in interest entitled to the preliminary injunction sought until a certificate had been obtained. *Gilmore et al. v. Sandersville R. Co. 149 F Supp 725.*

Other Recent Rulings

Expansion of City and Certificate Rights. The Alabama supreme court held that the expansion of cities' boundaries and police jurisdictions beyond those existing at the time of issuance of a certificate authorizing a motor carrier to transport goods within a specified radius from each of two cities did not increase the area in which the carrier was authorized to transport goods. *Towns Truck Lines, Inc. v. Cotton State Express, Inc. et al. 94 So2d 402.*

Transit Operating Ratio. The Utah commission authorized an intercity bus company to increase rates so as to produce an operating ratio of 92 per cent before income taxes. *Re Bingham Stage Lines, Case No. 4434, May 2, 1957.*

Test of Reasonableness. The North Carolina commission commented that the true test of the reasonableness of a rate is its effect on the entire system and not whether a particular part thereof is operated at a profit or a loss under the prescribed rate. *Re Motor Vehicle Common Carriers of Property, Docket No. T-825, Sub 11, April 26, 1957.*

Pullman Rates Increased. The Pullman Company obtained a 7 per cent increase in intrastate rates from the California commission, equating intrastate with interstate rates, on a showing that the increase would reduce the intrastate operating ratio to 115.5 per cent. *Re Pullman Co. Decision No. 54920, Application No. 38632, April 30, 1957.*

Nonrecurring Expense. The New Jersey commission disallowed as an operat-

ing expense an amount claimed by a water company for flood loss and refused to allow the amortization thereof since the item represented an unusual and nonrecurring expense. *Re Frenchtown Water Co. Docket No. 9873, May 8, 1957.*

Passenger Trains Discontinued. The Wisconsin commission authorized the discontinuance of a number of passenger trains in Wisconsin where the losses incurred were found to be so disproportionate to the need for the service as to justify discontinuance irrespective of the total earnings of the line and the system. *Re Chicago & N. W. R. Co. et al. 2-R-3143, May 10, 1957.*

Municipal Plant Return. The Wisconsin commission considered a return of 5.5 per cent on a municipal water plant's net book value rate base reasonable. *Re City of Milwaukee, 2-U-4641, May 10, 1957.*

Substandard Clearance Allowed. A joint application by a railroad and a shipper for authority to maintain a spur track with less than standard clearance was approved by the Missouri commission where the omission or failure to obtain approval prior to construction had been innocent and inadvertent, approval could have been obtained on timely application, and the evidence failed to disclose any undue hazard in view of the frequency and speed of rail movements over the track. *Re St. Louis-S.F.R.Co. Case No. 13,556, May 13, 1957.*

Commission Approval of Contracts. The North Carolina commission held that it had a right to direct motor carriers of freight to produce all contracts made with cartage agents for pickup and delivery and segregation of freight at break bulk points for approval or disapproval. *Re Rates, Charges, and Practices of Common Carriers, Docket Nos. T-209, Sub 1, et al. May 13, 1957.*

Transit Fare. The North Carolina commission authorized a transit company to institute a transfer charge and discontinue school fare tokens in order to produce additional revenue upon a showing that passenger volume had substantially declined and costs had increased. *Re Winston-Salem City Coach Lines, Inc. Docket No. B-243, Sub 5, May 14, 1957.*

Telephone Rate of Return. The Wisconsin commission granted a small telephone company a rate increase sufficient to afford a return of 5.3 per cent on a net book value rate base. *Re Wayside Teleph. Co. 2-U-4755, May 6, 1957.* In a separate proceeding by a new telephone co-operative, rates affording a return of 1.02 per cent were approved as requested. *Re Vernon Teleph. Co-operative, 2-U-4765, May 17, 1957.*

Water Rate of Return. A rate increase request by a small municipal water plant was approved by the Wisconsin commission, affording a rate of return of 5 per cent on a net book value rate base. *Re Village of Abbotsford, Clark and Marathon Counties, 2-U-4749, May 6, 1957.* Another municipal water plant showing extensive new capital improvements involving a substantial addition of debt was allowed a rate of return of 5½ per cent. *Re City of West Bend, 2-U-4732, May 17, 1957.*

Hearings Delayed. A federal court of appeals ruled that delays in hearings, sought by a contract purchaser of air-line stock and allowed by the Civil Aeronautics Board, did not constitute a breach of a stock acquisition contract where the contract did not expressly prohibit the pur-

chaser from seeking such delays, even though time had an important bearing on the performance of the contract. *Hartman et al. v. North Central Airlines, Inc. 241 F2d 859.*

Tariff Construction. In resolving an apparent ambiguity in a railroad tariff involving milling-in-transit privileges, a United States district court indicated that a railroad tariff is to be treated as if it were a statute, and that the same rule which authorizes the consideration of all parts of a statute which are material in the interpretation of a particular provision likewise applies to determining the meaning of a railroad tariff. *Louisville & N. R. Co. v. Red Comb Pioneer Mills, Inc. 149 F Supp 812.*

Defenses Not Recognized. The Delaware court of chancery held that defenses of *pari delicto,* estoppel, unclean hands, etc., were not recognized in actions by an interstate carrier to recover from a shipper undercharges in freight rates or rebates on freight charges since to do so would be to override the public policy reflected in the Interstate Commerce Act. *Schleiff v. Baltimore & O. R. Co. 130 A2d 321.*

Factors Affecting Permit Issuance. The Minnesota supreme court held that, in passing upon an application for a common carrier permit, lack of need of an additional permit and the effect such permit might have upon carriers already serving the area are valid considerations. *Re Paulson, 81 NW2d 875.*

Transfer of Motor Carrier Permit. The Texas supreme court commented that the issues before the commission, if no new service is established by the transfer of a motor carrier permit, are good faith, adequate equipment, financial ability, and willingness to abide with law and commission regulations, but where the transfer will result in the establishment of a substantially different service, an issue of public convenience and necessity arises for initial determination by the commission. *Texas R. Commission et al. v. Jackson (Hub Motor Lines et al.) (1957) 299 SW2d 266.*

Grade Separation Maintenance Cost. The Missouri commission, in ordering a railroad to pay the cost of maintaining a grade separation structure, commented that the proper method to use in arriving at the portion of the cost to be borne by the railroad, was to determine to what extent the presence of the railroad enhanced or enlarged the cost of the improvement; that is, to what extent did the presence of the railroad make the proposed improvement necessary. *Re State Highway Commission of Missouri, Case No. 13,507, March 25, 1957.*

Return Not Unreasonable. The New Jersey commission did not consider a return of 5.06 per cent on a water company's present rate base, or 5.44 per cent after the system had been fully metered, unreasonable. *Re Medford Water Co. Docket No. 9782, April 11, 1957.*

Duplicate Telephone Service Rejected. The Wisconsin commission held that residents of a boundary-line community were not entitled to telephone service from a particular company where another company was already serving in the area, since it would entail a duplication of facilities. *Re Karis, 2-R-4735, April 22, 1957.*

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Industrial Progress

...ylvania Pwr. & Lt. Plans ...Year Outlay of $200 Million

...NSYLVANIA Power & Light ...any expects to spend just under ...000,000 on new construction over ...xt five years, Charles E. Oakes, ...lent, told security analysts and ...ment bankers recently. The larg...ngle item of the new projects is ...00,000 for a 330,000 kilowatt ...ating plant to be in service in

...viewing the company's postwar ...nsion program, Mr. Oakes said ...property acquisitions and con...ion from 1946 through 1956 had ...red $432,400,000.

...ville Gas Expects to Spend ...0,000,000 in Next 20 Years

...ISVILLE Gas & Electric Com... expects to spend nearly $500,-...00 for new gas and electric ...ment in the next 20 years, ac...ng to Lawrence G. Dahl, vice ...lent.

...e L.G. & E. now has a generat...apacity of 615,000 kilowatts and ...e next 20 years it will need 1,-...00 kilowatts more.

...Industry Committee Named ...o Help Accelerate Air Conditioning Program

...MATION of a 12-man Air Con...ning Promotion Committee to ...ulate the promotion and sale of ...ential, commercial and industrial ...air conditioning equipment has ...announced by the American Gas ...ciation as the industry's latest ...r step to accelerate its develop... and marketing program in this ...growing field.

...e AGA, which recently doubled ...ppropriation for gas air condition...esearch during the current year, ...unced that W. W. Selzer, direc...f business promotion for the Columbia Gas System Service Corporation, will serve as chairman of the new special task force group operating under the General Promotional Planning Committee of the AGA PAR plan. The committee will coördinate the stepped-up efforts of industry research committees, gas air conditioning equipment manufacturers, and the sales and promotion organizations of utility companies.

Members of the new committee represent practically every region in the country, reflecting the nationwide interest by utilities in gas air conditioning. Committee members are, in addition to Mr. Selzer:

W. D. Williams, vice president sales, New Jersey Natural Gas Co., Asbury Park, N. J., and chairman of the AGA Residential Gas Section.

J. Robert Delaney, manager of gas sales, Cincinnati Gas and Electric Co., and chairman of the AGA Industrial and Commercial Gas Section.

B. C. Adams, Jr., vice president and general manager, The Gas Service Co., Kansas City, Mo.

Harold F. Carr, manager, residential sales promotion, Baltimore Gas & Electric Co., Baltimore, Md.

H. William Doering, heating and air conditioning manager, Springfield (Mass.) Gas Light Co.

E. L. Henderson, vice president, United Gas Corporation, Shreveport, La.

David J. Kerr, director of business development, Southern Union Gas Co., Dallas, Texas.

John S. McElwain, sales manager, East Ohio Gas Co., Cleveland, Ohio.

Frank N. Seitz, vice president sales, Southern Counties Gas Co., Los Angeles, Calif.

G. J. Tankersley, executive vice president, Gas Light Co. of Columbus, Columbus, Ga., and chairman of the Southern Gas Association Air Conditioning Committee.

R. J. Vandagriff, vice president sales, Laclede Gas Company, St. Louis, Missouri.

Private Utilities Active in 763 Research Projects

A "VERY substantial amount of research" is being done by privately owned electric utilities, it was reported recently at the Summer General Meeting of the American Institute of Electrical Engineers.

Howard P. Seelye, consultant for the Edison Electric Institute Research Projects Committee, told a symposium on research that 763 research projects, many of them of a major nature, are now in progress. His report was made in a paper, "Edison Electric Institute Survey of Research Projects of the Electric Utility Industry." The paper contained the results of a survey made among the 175 privately owned and operated utilities which are members of EEI.

Major research work of the power business is in transmission and distribution, with 302 projects under way. Power plant research was next with 229. Other research projects are being conducted in system planning, engineering and operation, 75; general engineering, 35; customers' utilization, 34; sales, 11; economics, 23; company management, 14; electronic computers, 2; personnel, and area development, 19 each.

Among the more significant projects being researched by utilities is atomic power, with "sixty-nine electric utility companies, either individually or as part of organized groups," participating in 14 nuclear reactor projects, Mr. Seelye said. Seven of these projects are either under construction or in the immediate preconstruction phase, while seven others are in various stages of planning.

"It seems evident . . . that the electric utility industry is carrying on a

(*Continued on page* 28)

very substantial amount of rese and cannot be accused of being gard in this subject," Mr. Seelye

McCabe-Powers Adds Hydr Hole Digger to Utility Li

THE addition of a hydraulic hole ger to its Powers-American lin utility bodies and equipment has announced by McCabe-Powers Body Company, St. Louis, Mo.

The digger, designated "E Master," is ideally suited for use the Powers-American Series P "Pole-Master" Hydraulic Derrick cording to Brooke Daly, company president. It can be installed on "Pole-Master" Derricks now in or factory-mounted in conjunc with a derrick and body built t individual operating requirements

Unit is fully-hydraulic in operat powered by a hydraulic pump dr by the truck engine. It will dig h up to 9′4″ in depth, at various an in practically all types of soil. auger is guided at all times, to as straight, clean holes. It travels up down on a twin-column support fr which can be turned to various p tions and extended or retracted t terrain and working conditions.

Auger is rotated in either direc by a reversible hydraulic motor. raised and lowered by a separate draulic motor which, in combina with downward thrust that can be plied by the derrick, provides m than ample "down pressure" for ging in exceptionally hard soil. digger controls are normally insta beside derrick controls in a rear b compartment, to give operator view of all digger and derrick m ment.

When hole has been dug, the di will swing out of the way to pe use of the derrick for setting p The digger can be furnished with gers up to 20″ in diameter, and special heads to facilitate dig where soil condition would retard ger operation.

Descriptive bulletin No. 208, be obtained from McCabe-Pow Auto Body Compnay, 5900 N Broadway, St. Louis 15, Missouri

AGA Accident Prevention C ference Scheduled for St. Louis Sept. 17-18

A COMPREHENSIVE sa workshop session featuring se simultaneous group meetings to cuss the most common accident p lems in the gas utility and pipeline dustry will be a highlight of

rican Gas Association's ninth an- accident prevention conference ember 17th and 18th at the Sher- Jefferson Hotel, St. Louis, Mo. e gas industry improved its safe- cord in 1956 for the ninth straight and achieved an all-time low ac- t rate.

arles Williams, the Gas Service Kansas City, Mo., will head the shop, which will provide the round for the first showing of Association's new safety flip s. Group leaders for the work- will be Charles T. Cummings, e Natural Gas Co., Clarksburg, Va.; John O'Toole, Utilities Mu- Insurance Co., New York; Stan- wens, Transcontinental Gas Pipe Corp., Houston, Texas; William ston, Cincinnati Gas & Electric Cincinnati, Ohio; Vincent A. ell, Long Island Lighting Co., sville, N. Y.; E. E. Taylor, hern California Gas Co., Los les; and M. B. Travis, Northern ral Gas Co., Omaha, Neb.

C. Baumann, Public Service ric and Gas Co., Newark, N. J., preside over the two-day confer- as chairman of the AGA Acci- Prevention Committee. Speakers e opening session will include H. Derrick, president, Laclede Gas St. Louis; Stanford Downey, y director, Southern Natural Gas Birmingham, Ala., and chairman e safety committee of the Inde- ent Natural Gas Association; and rt W. Otto, board chairman of de and second vice president of American Gas Association.

her first-day highlights will be resentation by Mr. Otto of the lent Prevention Awards to mem- mpanies reducing their disabling ies 25 per cent or more when ared to 1955. Included in this s Conference for the first time be the presentation of awards to ers of the 1956-57 National Fleet y Contest. A Plant Inspection will be led by William E. Ma- , Peoples Gas, Light & Coke pany, Chicago, Illinois; Peter y, Rochester Gas & Electric , Rochester, New York; Clint leton, New England Electric m, Boston, Massachusetts. This nding afternoon session will be- ith a talk and demonstration by . Kintz, District Supervisor of h & Safety, and H. F. Browne, y Engineer of the U.S. Depart- of Interior, Bureau of Mines, s, Texas. The demonstration will le a flame propagation demonstration of gases (natural and manufactured) and through the use of slides, the descriptions, analysis and results of a number of recent incidents involving gas will be discussed.

The Safety Workshop will fill the morning schedule September 18th. Following a luncheon talk by W. B. Haas, Northern Natural Gas Co., the Conference will conclude with an "I've Got a Safety Secret" panel program. E. S. Beaumont, Peoples Gas Light and Coke Co., will be moderator and panelists will include R. L. Conway, United Gas Corp., Shreveport, La.; G. J. McKinnon, Michigan Consolidated Gas Co., Detroit; Charles O'Reilly, Boston Gas Co., Boston; and H. G. Hill, Union Gas Co. of Canada, Ltd., Chatham, Ontario, Canada.

Utilities from all sections of the country will participate in a special Materials Exchange Display where they will show materials, equipment and ideas which have been employed in helping improve their safety program.

Doubling of PG&E 'Super Inch' Main to Be Completed

"SUPER Inch," Pacific Gas and Electric Company's 34-inch transmission line importing out-of-state natural gas, will be completely doubled over its 502-mile length by the end of this year, the company disclosed recently in announcing the award of a contract for the final 138 miles of "looping." The announcement was made by N. R. Sutherland, president and general manager of the company, who said the project will cost more than $15,000,000.

The principal contract, awarded to Engineers Limited Pipeline Company, calls for installation of the big steel pipe to start in mid-July. In associated work, the horsepower of six of the 10 compressors at Topock compressor station will be increased from 2500 hp each to 3500 hp. Other improvements will be made at the Hinkley and Kettleman stations.

When this work is completed, "Super Inch" will transmit 950,000,000 cubic feet of natural gas daily; represent a total investment of $128,612,000; and have about 350,000 tons of steel underground—enough to build a heavy-duty railroad track 1458 miles, or nearly from San Diego to Seattle.

Conversion of four compressors at Hinkley and one at Topock plus addition of one compressor at Topock in

(*Continued on page* 30)

1958 will increase the deliveries billion, 25 million cubic feet of daily.

"Super Inch" is connected to pipeline system of the El Paso ural Gas Company and is supplied fields in Texas and New Mexico carries about two-thirds of PG& natural gas supplies. Progressive pansion of the big transmission has been almost an annual event it first went into operation in 19

Transistorized Power Supply Featured by Motorola's New Mobile Radios

USING all-electronic power plies, a new line of mobile radio recently announced by Motorola eli inates vibrator replacement proble Called the "T-Power" radiopho the new two-way radio units incor ate a transistorized switching cir in the power supply in place of conventional vibrator. In this way, part most frequently requiring placement in mobile radio units— vibrator—and the "hash" produced the vibrator are eliminated.

"T-Power" radiophones offer installation versatility. The drawer is interchangeable betw dash or trunk mounted installat

The new mobile radiophones at 20 and 25 watts power output available for operation in the 2 mc and the 144-174 mc bands. T operate from 12-volt negative gro sources and are directly intercha able with equivalent Motorola "T V" trunk mount units, which operate from 12-volt negative gro sources. These models can be supp with either conventional squelch o "Private-Line" radiophones wh prevent the reception of nuisance m and messages originating outside "Private-Line" radio system.

More information about Moto "T-Power" radio units can be tained by writing to Motorola C munications and Electronics, D TIC, 4501 Augusta Boulevard, C cago 51, Illinois.

Chesapeake and Potomac Has $2,288,000 Program

OVER two million dollars was propriated for plant additions and provements by the Board of Direc of the Chesapeake and Potomac T phone Company, Washington, D. at their regular monthly meeting June 27th.

According to H. Holmes Vogel, president in charge of the Washin company, this appropriation wi

ls $2,288,000 will be used on a e number of projects required to t the continuing demand for serv-

mbustion Engineering Award- d Contracts by Four Utilities

N the six weeks' period ending y 2nd, Combustion Engineering, . received contracts amounting to e than $25,000,000 from four util- companies for boilers that will sup- 1,270,000 kilowatts of electric ver, it was announced by Donald Walker, vice president and director sales of the company.

he orders were placed by the fol- ing utilities: Consolidated Edison mpany of New York—a 340,000- unit for its Astoria station in eens, N. Y.; the Florida Power & ht Company—two 240,000-kw. ts for its new Port Everglades ver station; Pennsylvania Power ight Company—a 330,000-kw. unit a new plant near Harrisburg, Pa.; the Florida Power Corporation— 20,000-kw. unit for its P. L. Bar- Station, St. Petersburg.

"A significant aspect of these con- cts," said Mr. Walker, "is that all r of the larger units represent the t purchases by the companies con- ned of controlled circulation boil- , a special design developed by mbustion for high-pressure, high- acity installations. This is indica- of the effort utilities are making maintain low rates in the face of in- asing fuel and operating costs by izing the more efficient high pres- e cycles in combination with high t capacities.

"These purchases, and others in ospect," Mr. Walker added, "are dence of a revival in utility indus- buying of capital equipment fol- ving some letup from the unprece- nted high level of the past two rs."

Houston Lighting Orders $20,000,000 Plant

HOUSTON Lighting and Power . has placed an order with Westing- use Electric Corp. for construction a multimillion dollar generating t.

W. A. Parish, president, said the nt will be the largest in the South- st.

While the cost was not disclosed, it estimated the company will pay re than $20,000,000 for the new ility.

It will go into operation during 1961 at the company's Smithers Lake plant in Fort Bend County.

The construction is part of $300,000,000 Houston Lighting and Power is spending for expansion during 1957-1960. The expansion will mean an addition of 400,000 kilowatts in 1958, 385,000 in 1959, and 440,000 in 1960.

The aggregate total of eight units being added during the next five years is 1,500,000 kilowatts, or more than the 1,421,000 kilowatts which has been built during the company's 75-year history.

Argonne Launches The Argonaut

THE Argonaut—The Argonne assembly for university training—a new educational training reactor at Argonne National Laboratory, was the center of much attention recently during an industrial and educational symposium held at the Laboratory. The high point of the two-day meeting, attended by representatives of 32 universities and 60 industrial firms, was the demonstration of this low cost "do-it-yourself" reactor. The conceptual design of the Argonaut was developed under the direction of Dr. B. I. Spinrad, Associate Director of the Laboratory's Reactor Engineering Division; David H. Lennox, of the same division, served as Project Engineer.

There were three criteria which guided the design and construction of this reactor: It had to be useful for reactor research and training; it had to be ultrasafe; it could cost no more than $100,000. This reactor went critical on February 9th, in the midst of the dedication of Argonne's Experimental Boiling Water Reactor, the first plant-size power reactor in the nation. The Argonaut concept may prove as important in the area of nuclear education as the EBWR is in the field of nuclear power.

The Argonaut is a low power, low cost reactor of wide flexibility. It was developed primarily for use by students attending the Laboratory's International School of Nuclear Science and Engineering, where courses are taught in reactor theory and nuclear physics. The Argonaut is designed to operate at an intermittent power development of 10 kilowatts. Its safety features and simplicity make it particularly suited for training purposes. The reactor has received the attention of educators from this country and abroad.

The two-day program included

tours of Laboratory facilities, talks on design and construction of the Argonaut reactor, the presentation of Argonne National Laboratory's plans to use the reactor, and discussion of the critical properties and safety of the reactor. Demonstration of the Argonaut's approach to criticality, a brief operation, a scram, and an on-site description of the system were given.

A brief ceremony marked the release of the custody of the reactor from the Laboratory's Reactor Engineering Division to the International School, Dr. R. G. Taecker, Director. In making the presentation, Dr. Norman Hilberry, Director of Argonne National Laboratory, made the following comment: "This highly useful training and research reactor is the product of many inventive minds within the Laboratory's scientific and engineering staff. We are confident that this reactor concept will serve as a model for a series of reactors which will equip many institutions in the United States and abroad for training students for the nuclear age."

Students may participate in observing the behavior of the reactor as fuel is added to it to make it critical. A self-sustaining chain reaction can be achieved with many different shapes of fuel loading and correspondingly different critical masses. The distribution of fissions in the fuel can be studied. Poisons (neutron absorbers) and bubbles, such as may be produced by boiling in a power system, can be introduced and their effects observed.

The reactor can be made to change its power in a number of ways to observe its response to control rod operations and also its response to simulated operating conditions at power.

The reactor can be used for destructive chemical analysis. The activation analysis technique, in which a sample is irradiated in order that characteristic radioactives of its constituents may be examined, is such. The "danger coefficient" test in which elements of high neutron absorption are detected by their effect on the chain reaction is another.

It may be used as a source of radiations for instrument calibrations, shielding tests and in particular as a neutron source for studies on properties of new reactor designs.

These features, all of which are required to illustrate the properties of reactors to students, can in addition be used for research and development in the nuclear energy field.

(*Continued on page* 33)

BCR Continues Study Of Uses of Fly Ash

R support of industry-sponsored research has helped us turn a waste by-product into a salable commodity," Earl M. Parrish, general superintendent — power station department, Duquesne Light Company, stated at the Annual Meeting of Bituminous Coal Research, Inc., at White Sulphur Springs, W. Va., recently.

"Bituminous Coal Research, Inc., in cooperation with our company as well as other member company electric utilities, has succeeded in utilizing fly ash, a by-product of the combustion of pulverized coal, in the building, contracting, and processing industries," he said.

Disposal of fly ash has been a great problem, Mr. Parrish explained, since it must be stored in such a manner that it will not blow away, wash away, or become a nuisance to the surrounding communities.

To combat this, he said, BCR in cooperation with other interested groups has been active for several years in the research and study of the applicable uses of fly ash. He pointed out that many of these activities were undertaken jointly with Duquesne Light Company.

In citing a few of the accomplishments made in fly ash utilization, Parrish said that Bituminous Coal Research, Inc., has:

(1) been instrumental in having fly ash used in the mix of concrete and cinder blocks;

(2) cooperated in designing a fly ash mix for reinforcing concrete pipe;

(3) worked with Duquesne Light Company to install the first Pittsburgh area bituminous road containing fly ash—the results of which three years later led the Pennsylvania State Highway Department to install a test road of the same design;

(4) worked with Duquesne to build a demonstration concrete road at Duquesne's Elrama Power Station;

(5) assembled and published considerable information on the utilization of fly ash, including publishing an Aid-to-Industry handbook on fly ash; and

(6) had fly ash sintered and has made lightweight aggregate building blocks.

Mr. Parrish said that the advantages of using fly ash in the building, contracting, and processing industries are that it increases density and ultimate strength, improves the flow of concrete in the forms, and reduces costs. In concrete or cinder blocks, he said, the cost is reduced approximately ½ cent per block; in the ready-mixed concrete it is reduced by approximately 50 cents per cubic yard.

The cost of disposal of fly ash is approximately $1.00 per ton, he said, and the average selling price is $1.25 per ton. With about 10 per cent of the weight of coal being reclaimed in fly ash, he explained, this savings amounts to roughly 4.5 per cent of the cost of coal we pay in our area.

"A savings such as this will be of value to utilities in helping them reduce their costs and may even postpone rate increases to customers," he added.

New Generating Unit Ordered For Puerto Rico: Will Be Largest In Caribbean Area

THE largest single generating unit ever to be installed in the entire area bordering the Caribbean has been ordered for Puerto Rico, S. L. Descartes, executive director of the Puerto Rico Water Resources Authority, stated recently. In New York to confer with engineers regarding the project, Mr. Descartes said that the unit, with a rated capacity of 75,000 kw is scheduled for completion late in 1959.

Puerto Rico anticipates an 18 per cent growth in power production during the fiscal year 1957-58, a similar increase in the following year, and if industrial development proceeds at its current pace, power production which now exceeds 1,200,000,000 kwh annually, will double by about 1960, Mr. Descartes said.

The capacity of the various power plants of the Puerto Rico Water Resources Authority now approximates 320,000 kw. Two new 40/44,000 rated kw units are now in process of erection on the south coast. One is scheduled to be finished before the end of this year and the other about the same time in 1958.

VEPCO Receives Merit Award For Annual Report

VIRGINIA Electric and Power Company has just received the Merit Award from *Financial World* in the magazine's survey of annual reports to stockholders. It was the tenth consecutive year Vepco has won the Award.

Vepco President Edwin H. Will said the citation qualifies the company to compete in three successively narrower selections resulting in awards of bronze, silver and gold "Oscar" trophies.

Vepco previously has won bronze and silver "Oscars" for the best annual reports in its industrial subcategory and in the broad utility field.

The company was one of 1,874 corporations, from among 5,000 entries, to be cited for information content and technical excellence of annual reports, making it eligible for the second round of judging.

Connecticut Light & Power Forms Data Processing Department

THE Connecticut Light and Power Company has announced the formation of a Data Processing Department at its general headquarters with George A. Ford, former supervisor of the company's machine accounting department, as its director. The new department will study the application of an electric computer to the records and record-keeping of all departments of the company. Mr. Ford's successor as supervisor of machine accounting is Cornelius J. Scollan. Named assistant to Mr. Scollan was N. Louis Pellechia.

Several other changes have become effective in CL&P's industrial sales department. Joseph F. Murphy, industrial sales engineer, has been named coordinator of the electric and gas sales activities of the industrial sales department in the Meriden district.

Emil Gross, industrial sales engineer in Meriden, has been transferred to the company's Bristol district in the same capacity.

John Kroner, engineering sales assistant in the New Britain district, succeeds Mr. Gross in Meriden.

Samuel H. Lawson, engineering sales assistant in the Bristol district, is transferred to New Britain succeeding Mr. Kroner.

Two-Stage General Purpose Centrifugal Pumps, Class GT

A 16-PAGE, 2 color bulletin featuring Ingersoll-Rand's Class GT general-purpose, centrifugal pumps is now available. GT pumps are built in six basic sizes ranging in capacities from 100 to 3500 gpm, pressures to 450 psi, heads to 1100 ft. and temperatures at 300°F. They are horizontally split to permit complete accessibility of all internal parts without disturbing the suction and discharge piping. According to the announcements, the pumps have widespread use on boiler-feed service at pressures to 450 psi in industrial and municipal power plants.

The smaller size pumps feature single-suction impellers which are mounted back to back, with inlets opposed, thereby neutralizing axial thrust. The larger sizes have double-suction impellers which allow the liquid handled to enter simultaneously from both sides. This double-suction design also provides thrust-free operation of the pump under normal operating conditions.

This new bulletin, Form 7062-C, fully describes in detail the many advantages of the Class GT pumps. It also incorporates cross-sectional drawings, installation views, selection charts and dimension tables.

Southwest Electric Compani[es] Form Nuclear Power Group

FORMATION of an atomic e[lec]tric power research program for [the] Southwest area in which natural [gas] abounds, has been announced b[y a] group of 13 electric companies. T[he] new group which was officially [in]corporated in Little Rock, Ark., in June is known as Southw[est] Atomic Energy Associates, Inc.

The 13 companies forming the n[ew] organization are the same ones t[hat] organized the Southwest Power P[ool] during World War II, one of [the] largest interconnected electric s[ys]tems in the nation. The pool wh[ich] was eminently successful in preve[nt]ing power shortages during and i[m]mediately after the war has con[tin]ued in operation. These companies [to]gether serve a total of 2,225,[...] customers.

First president of Southw[est] Atomic Energy Associates is J. R[ob]ert Welsh, president of Southwe[st]ern Gas and Electric Compa[ny,] Shreveport, La. W. O. Turner, pr[esi]dent of Louisiana Power and Li[ght] Company and Gordon Evans, pr[esi]dent of Kansas Gas and Elec[tric] Company are vice presidents. [Ac]cording to Mr. Welsh the program [is] aimed at development of a practi[cal] use of nuclear energy as supp[le]mental fuel for future electri[c] needs. "Present available fuel in t[he] Southwest area permits the gene[ra]tion of electricity at costs, much l[ow]er than those possible from nucl[ear] energy," Mr. Welsh announced.

"However, the new corporat[ion] hopes to contribute a great deal to [the] advancement of atomic technolo[gy.] Also, at the same time we plan [for] the ultimate construction and ope[ra]tion of one or more nuclear pla[nts] with electric power generating ca[pa]city of 200,000 to 400,000 kilowa[tts] each," Mr. Welsh announced. [An] expenditure of $5,000,000 in the n[ext] four years on research and devel[op]ment of an atomic power program [is] planned by the organization.

In addition to the companies me[n]tioned, other companies from f[our] states in the group are: Arkans[as-]Missouri Power Co., Arkansas Po[wer] & Light Co., Central Louisiana El[ec]tric Co., Inc., The Empire Distr[ict] Electric Co., Gulf States Utilities C[o.,] Mississippi Power & Light Co., M[is]souri Public Service Co., New Orle[ans] Public Service, Inc., Oklahoma G[as] and Electric Co. and Public Ser[vice] Co. of Oklahoma.

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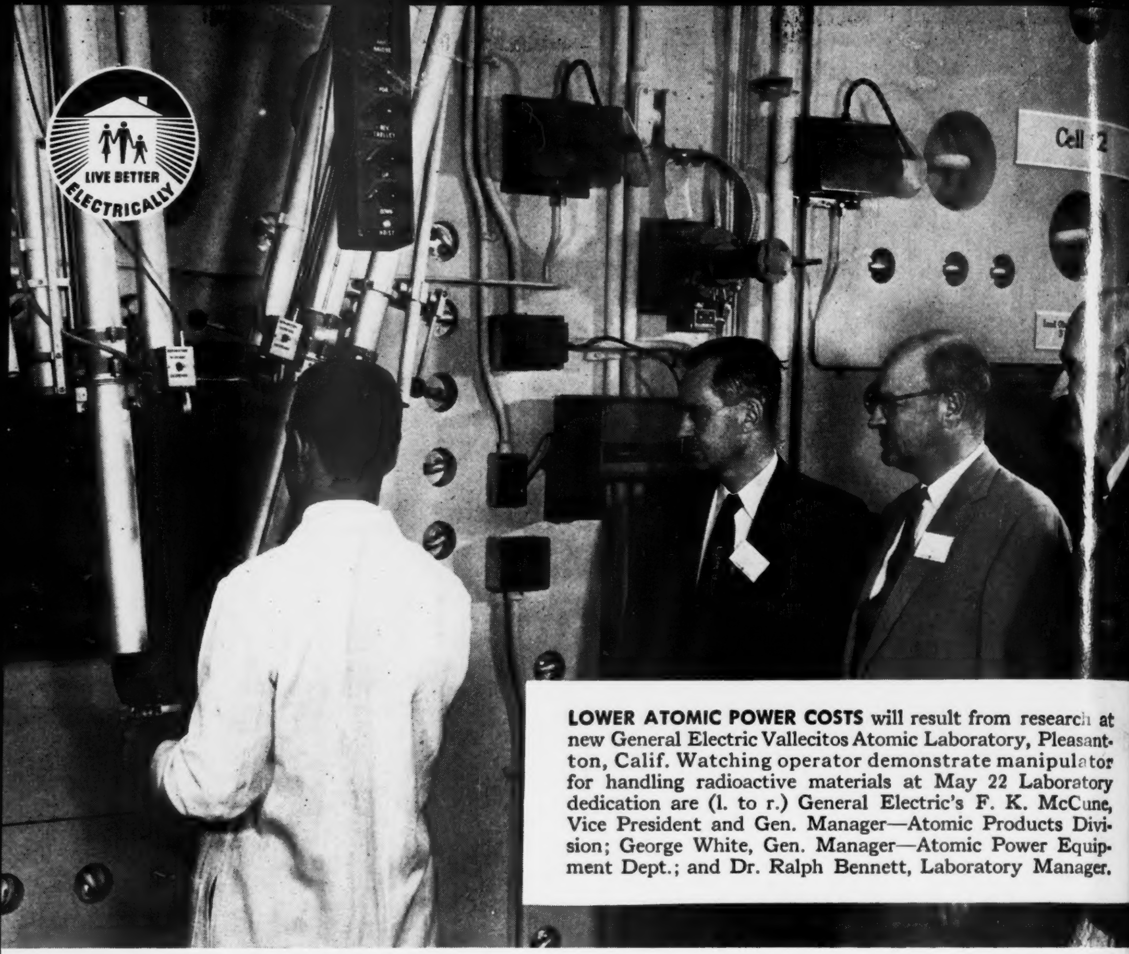

LOWER ATOMIC POWER COSTS will result from research at new General Electric Vallecitos Atomic Laboratory, Pleasanton, Calif. Watching operator demonstrate manipulator for handling radioactive materials at May 22 Laboratory dedication are (l. to r.) General Electric's F. K. McCune, Vice President and Gen. Manager—Atomic Products Division; George White, Gen. Manager—Atomic Power Equipment Dept.; and Dr. Ralph Bennett, Laboratory Manager.

New research heralds lower atomic power costs

General Electric Vallecitos Atomic Laboratory will help electric utilities meet growing power demands

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The vital experience gained by operating the Vallecitos reactor, plus the research and development done in the Laboratory will stride in the direction of lowering atomic costs. For information on General Electric's progress in atomic developments, contact your local Apparatus Sales Office. General Electric Company, Section 301-341, Schenectady 5, New York.

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